WMD-DT1

SERVICE MANUAL

6983

US Model
Canadian Model
AEP Model

DAT Digital Audio Tape
WALKMAN

Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MT-WMDDT1-108

SPECIFICATIONS

Tape: Digital audio tape
Sampling frequency: 48 kHz, 44.1 kHz, 32 kHz
Quantization: Standard: 16-bit linear
Long-play mode: 12-bit Non linear
Frequency response: Standard: Fs 48 kHz 20 – 22,000 Hz (+1.0 dB/–1.5 dB)
Fs 44.1 kHz 20 – 20,000 Hz (+1.0 dB/–1.5 dB)
Fs 32 kHz 20 – 14,500 Hz (+1.0 dB/–1.5 dB)
Long-play mode:
Fs 32 kHz 20 – 14,500 Hz (+ 1.0 dB/– 1.5 dB)
Wow and flutter: Below measurable limit (less than ± 0.001% W.PEAK)
Output: REMOTE/PHONES: nine pole jack
PHONES: stereo minijack
load impedance 8 – 300 Ω
Power output: 5 mW + 5 mW 16 Ω
Power requirements: 3 V DC
Two LR6 (size AA) batteries
Two rechargeable batteries (not supplied)
DC IN 3V jack accepts:
• Sony AC-E30L AC power adaptor (not supplied) for use on:

U.S.A. and Canada	120 V AC, 60 Hz
U.K.	240 V AC, 50 Hz
European countries	220 – 230 V AC, 50 Hz
Other countries	120 V AC, 50 Hz or 220 V AC, 60 Hz

• Sony DCC-E130L car battery cord (not supplied) for use on 12 V car battery

Battery life:

Battery	Playback
Sony alkaline AM3 (N)	Approx. 4 hours
Sony rechargeable NC-AA-2	Approx. 1.5 hours

Do not use the manganese batteries with this unit.

Dimensions: Approx. 116.3 × 28.5 × 69.5 mm ($4^5/_8 \times 1^1/_8 \times 2^3/_4$ in.) (w/h/d)
Mass: Approx. 250 g (8.9 oz.) incl. batteries, not incl. other accessories

Design and specifications subject to change without notice.

Optional Accessories

AC power adaptor AC-E30L
Battery charger kit BPK-800
Rechargeable battery NC-AA-2
Car connecting pack CPA-3
Car battery cord DCC-E130L
Stereo active speaker system SRS-88
Earphones (headphones) with micro plugs MDR-D55, MDR-D77
DAT cleaning cassette DT-10CL

MICROFILM

DIGITAL AUDIO TAPE PLAYER

SONY®

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

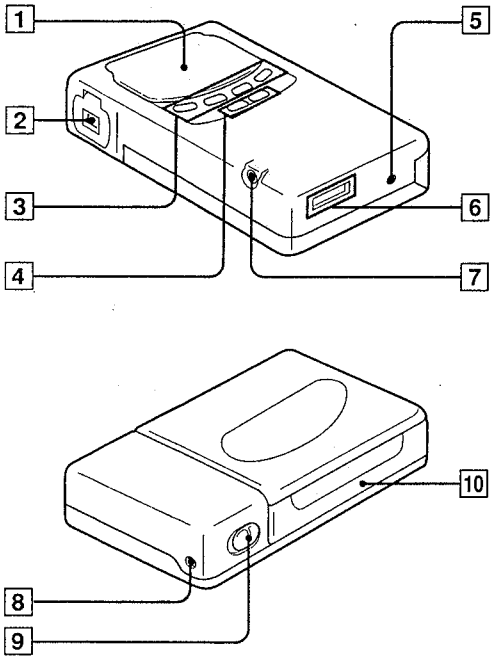
SECTION 1
GENERAL

This section is extracted from instruction manual.

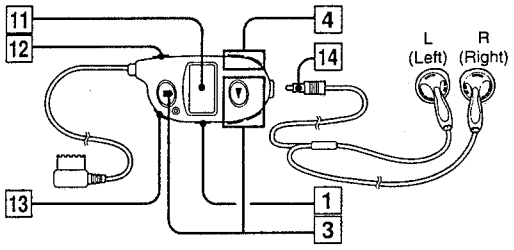
Parts Identification

Refer to the pages in ( ) for details.

Main Unit

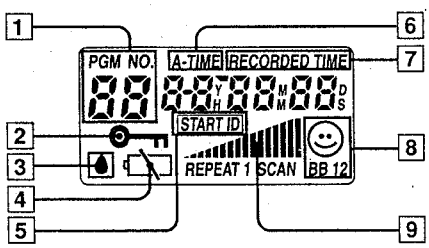


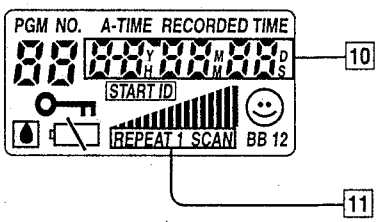
Stereo Earphones with Remote Controller



1 Main unit: Hold cover (20)
Remote controller: HOLD switch (20)
2 Battery compartment (8)
3 Tape operation buttons (12)
4 VOL (volume) buttons (11)
5 BATT (battery) indicator
This indicator lights up when the tape is running, or flashes when the batteries become weak.
6 REMOTE/PHONES (remote controller/earphones) jack (11)
7 PHONES (earphones) jack (21)(22)
8 DC IN 3V (external power input) jack (9)(21)
9 OPEN switch (10)
10 Cassette holder (10)
11 Display window (14)(15)
12 BB/AVLS (Bass Boost/ Automatic Volume Limiter System) button (19)
13 SCAN/REPEAT (music scan/ repeat play) button (17)(18)
14 Micro plug

Display Window of the Remote Controller





1 Indicates the current track number if the program number is recorded on the tape.
2 Appears when the HOLD switch on the remote controller is set to the "HOLD" position.
3 Flashes when the moisture condensation has occurred inside the unit. (The unit will automatically shut off.)
4 Flashes when the batteries inside the unit become weak.
5 Appears when the unit detects the start ID.
6 Appears when the absolute time (elapsed playing time of the tape) is being displayed. (during basic tape operation except when the AMS function is in operation)
7 Appears when the recorded date or recorded time is being displayed. (during playback or Repeat play) (Date function)
8 Appears when the Bass Boost or AVLS function is in operation.
9 Current volume level indication

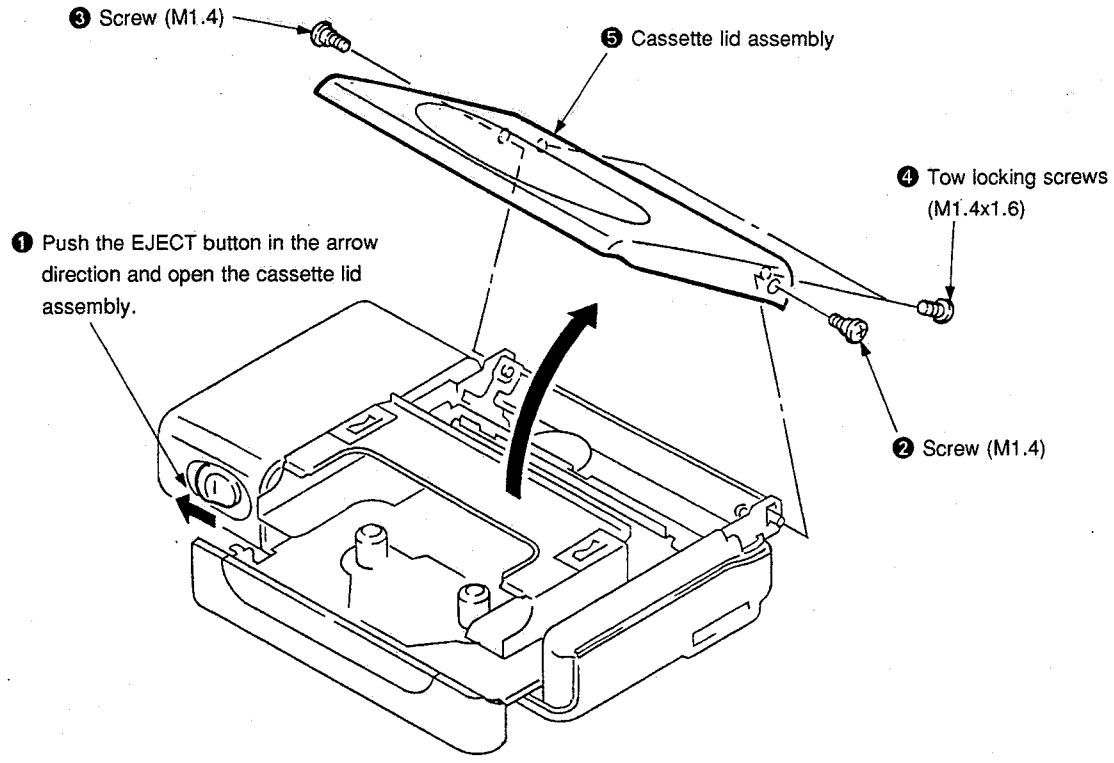
10 Tape counter/Message indication
The following indications appear:
- Absolute time*1
- The number of times you have pressed the ▶▶/▶▶| (▶▶) or |◀◀/◀◀ (◀◀) button for activating the AMS function
- "OPEn" (when you slide the OPEN switch)
- "TOP" (at the beginning of the tape)
- "END" (at the end of the tape)
- Each pressing of the ▶ button changes the indication cyclically as follows:
"SP" (standard-play mode) or "LP" (long-play mode) and the sampling frequency → recorded date (year, month and date)*2 → recorded time (hour, minute and second)*3 → normal display mode
- "Error" (when the malfunctions occur) (The unit will automatically shut off.)

11 Appears when the Repeat play or Music scan function is in operation.

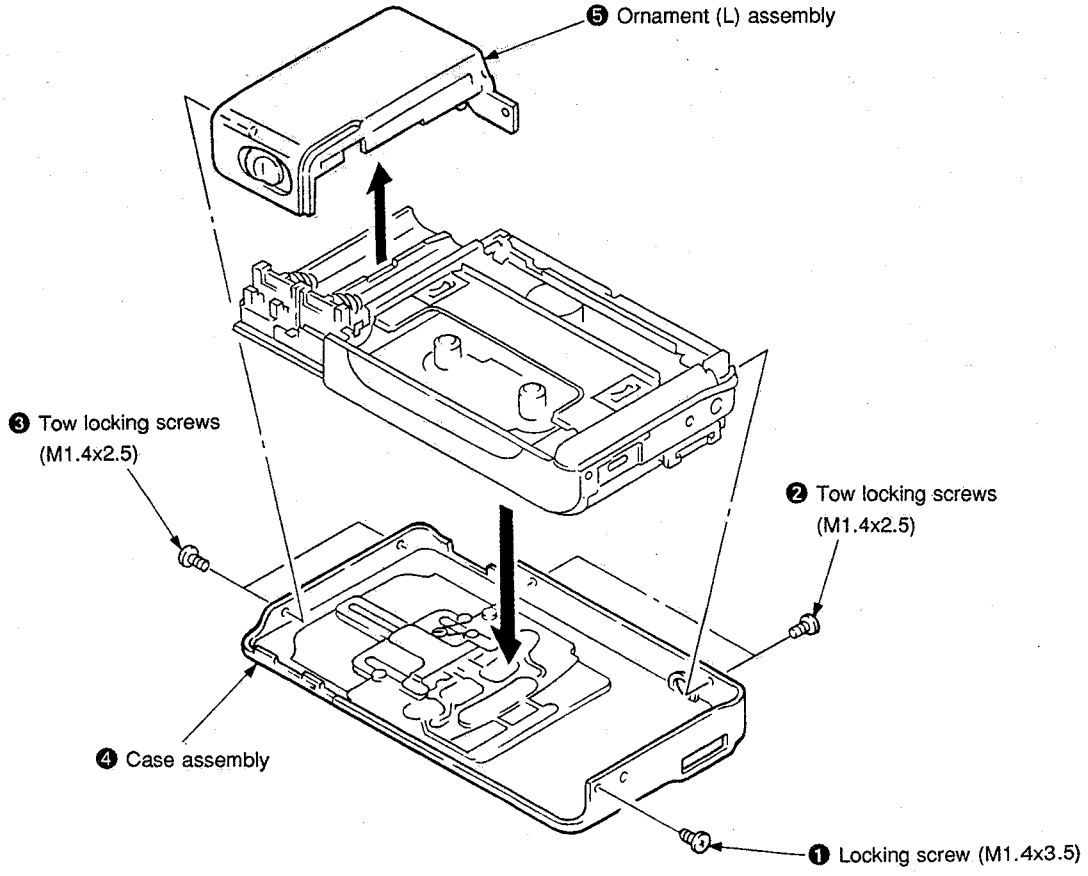
*1 When the absolute time has not been recorded on the tape, "– H – – M – – S" will be displayed.
*2 When the recording date has not been recorded on the tape, "– – Y – – M – – D" will be displayed.
*3 When the recording time has not been recorded on the tape, "– – H – – M – – S" will be displayed.

SECTION 2
DISASSEMBLY

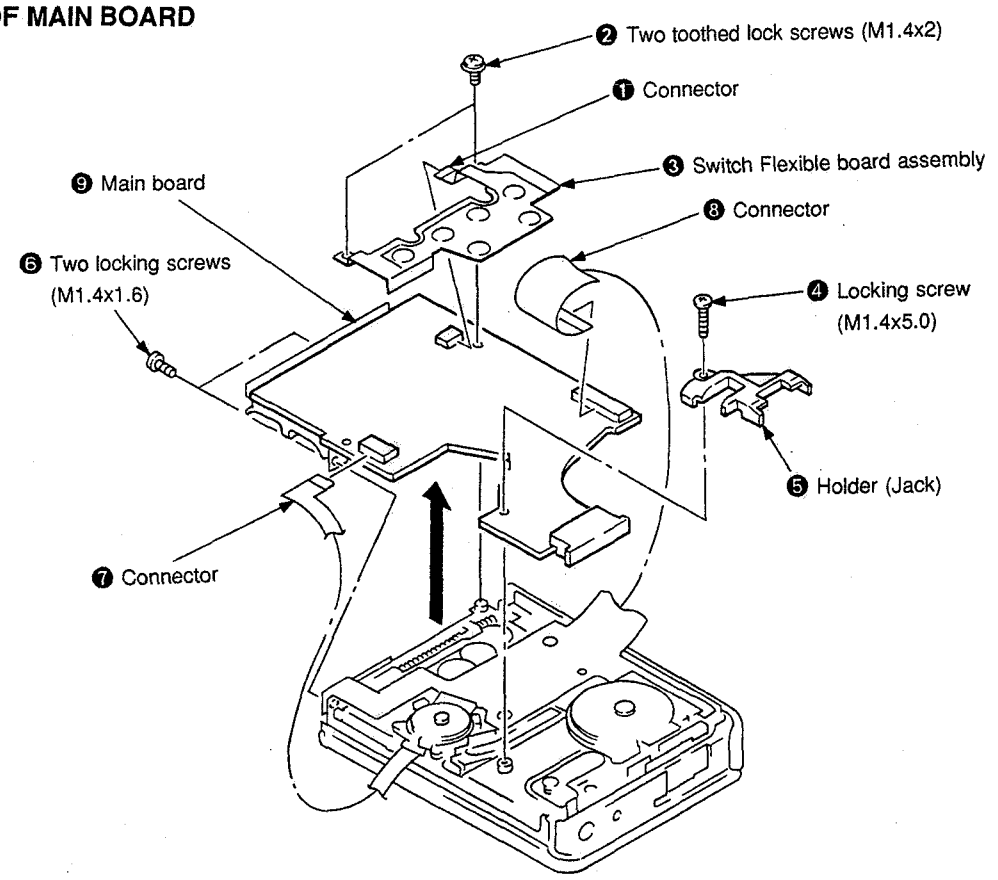
2-1. REMOVAL OF CASSETTE LID ASSEMBLY


❸ Screw (M1.4)
❺ Cassette lid assembly
❹ Tow locking screws (M1.4x1.6)
❶ Push the EJECT button in the arrow direction and open the cassette lid assembly.
❷ Screw (M1.4)

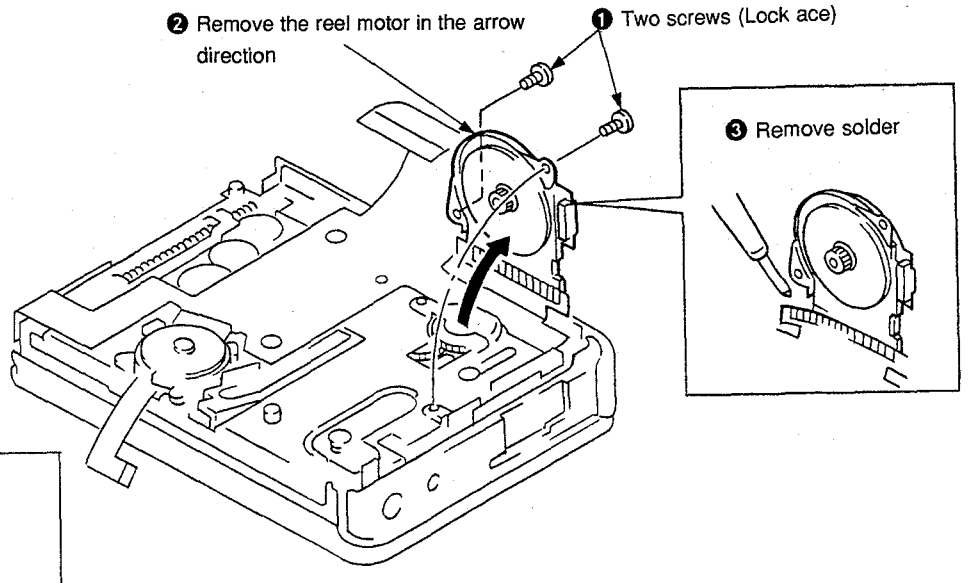
2-2. REMOVAL OF CASE AND ORNAMENT (L) ASSEMBLIES



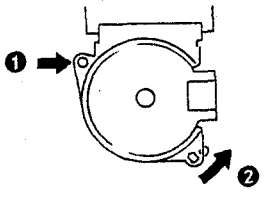
2-3. REMOVAL OF MAIN BOARD



2-4. REMOVAL OF REEL MOTOR

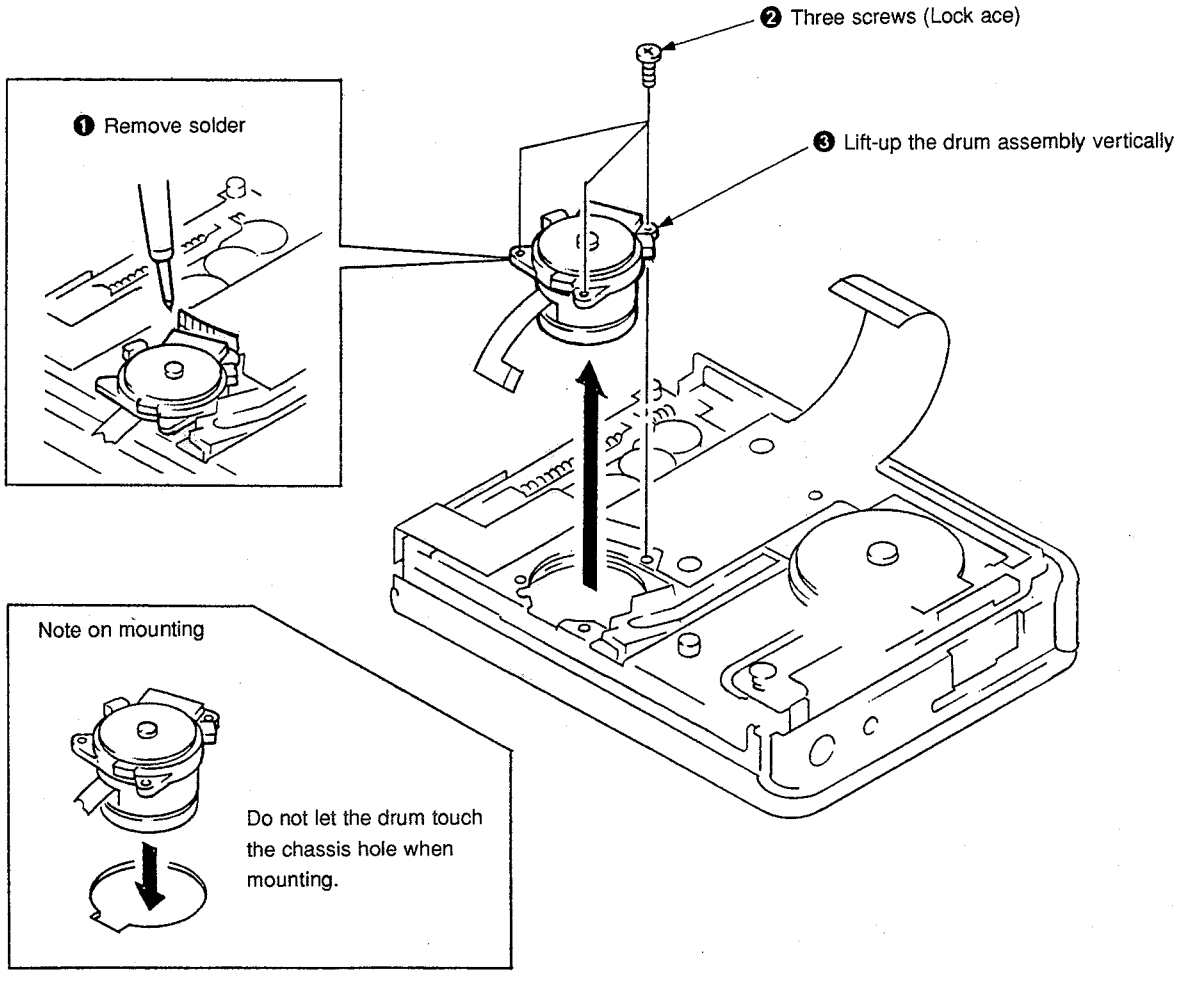


Note on mounting



❶ First, match this hole with the hole of the chassis.
❷ Match this hole with the hole of the chassis by turning the reel motor counterclockwise.
* Mounting the reel motor vertically may damage the gear.

2-5. REMOVAL OF DRUM ASSEMBLY


❷ Three screws (Lock ace)
❶ Remove solder
❸ Lift-up the drum assembly vertically
Note on mounting
Do not let the drum touch the chassis hole when mounting.

SECTION 3
TEST MODE

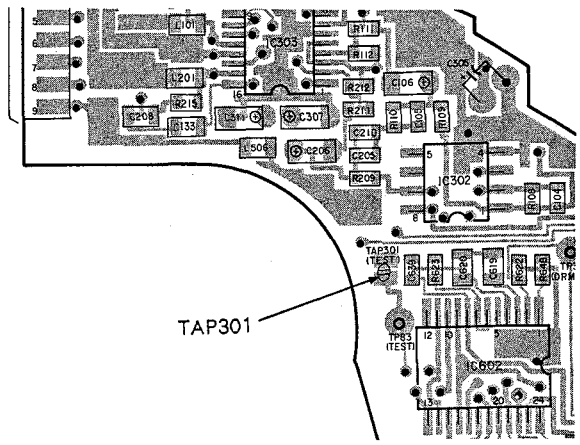
The microprocessor of this unit has eight test modes.
Performing test modes requires the remote commander RM-DT1MP provided.
Information on the test modes are displayed on the LCD of the remote commander.
This service manual describes the four test modes which are used in the checks in servicing.

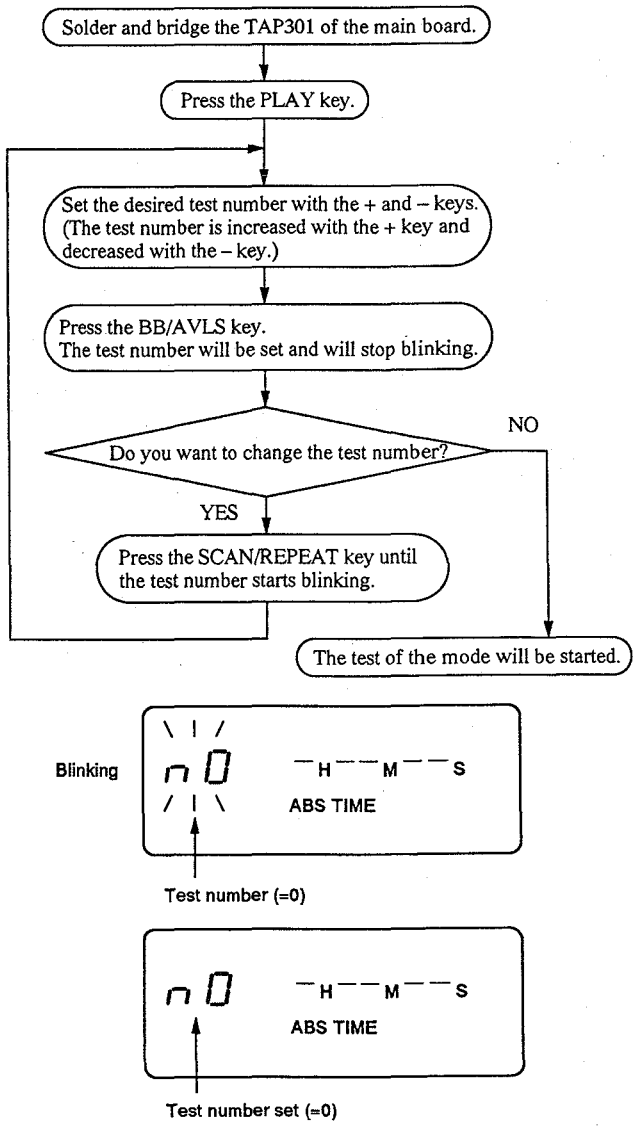
3-1. Test Mode Types

Test Number	Name of Mode
0	Normal test mode
1	Error rate measurement mode
2	Mechanism individual operation mode (No tape)
3	Mechanism individual operation mode (With tape)
4	Motor constant-voltage drive mode (No tape)
5	End sensor check mode
6	Key input check mode
7	Aging 1 mode

3-2. Setting Test Modes

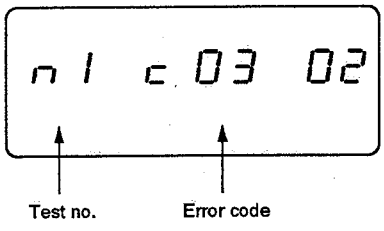
— Main board (side A)—




Solder and bridge the TAP301 of the main board.
Press the PLAY key.
Set the desired test number with the + and – keys. (The test number is increased with the + key and decreased with the – key.)
Press the BB/AVLS key. The test number will be set and will stop blinking.
Do you want to change the test number?
NO
YES
Press the SCAN/REPEAT key until the test number starts blinking.
The test of the mode will be started.
Blinking
H M S
ABS TIME
Test number (=0)
H M S
ABS TIME
Test number set (=0)

3-3. CAUTION Display in Test Mode

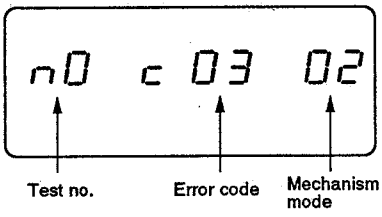
- When the CAUTION is detected, CAUTION and the error code will be displayed.
- CAUTION can be released by pressing the PLAY key.



3-4. Normal Test Mode=0

- Operate the keys in the same way as in the normal mode. When CAUTION occurs, the error code and the mechanism operation mode at that time will be displayed on the LCD.

(LCD display when CAUTION occurs)



Error Code List

Error Code	Contents
01	The drum motor is not rotating or the drum FG has not been detected
02	The reel motor is not rotating or the reel motor FG has not been detected
03	The drum motor speed is not stable
04	The reel motor speed is not stable
05	The tape top has not been detected
06	The tape end has not been detected
07	Tracking is not stable
08	The PLL does not lock

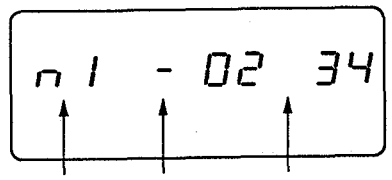
Mechanism Operation Mode List

Mechanism Operation Mode	Contents
01	STOP
02	FWD×1 (Standard speed)
03	FWD×2 (CUE)
04	FWD×4 (Approx. ×4 speed FORWARD)
05	FWD×8 (Approx. ×8 speed FORWARD)
06	FF
07	RVS×1 (Standard speed)
08	RVS×2 (REVIEW)
09	RVS×4 (Approx. ×4 speed REVERSE)
10	RVS×8 (Approx. ×8 speed REVERSE)
11	REW

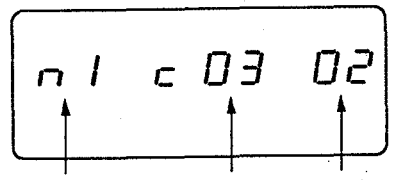
3-5. Error Rate Measurement Mode=1

- The error rate of the Ach or Bch is measured and the result will be displayed on the LCD.
  The error rate displayed can be selected by the BB/AVLS key.
- Operate the keys in the same way as in the normal mode. When CAUTION occurs, the error code and the mechanism operation mode at that time will be displayed on the LCD.

(LCD display in the test mode)



(LCD display when CAUTION occurs)



Error Code List

Error Code	Contents	Detected or Not
01	The drum motor is not rotating or the drum FG has not been detected	○
02	The reel motor is not rotating or the reel motor FG has not been detected	○
03	The drum motor speed is not stable	○
04	The reel motor speed is not stable	○
05	The tape top has not been detected	○
06	The tape end has not been detected	○
07	Tracking is not stable	×
08	The PLL does not lock	×

○ means error has been detected
× means no error has been detected

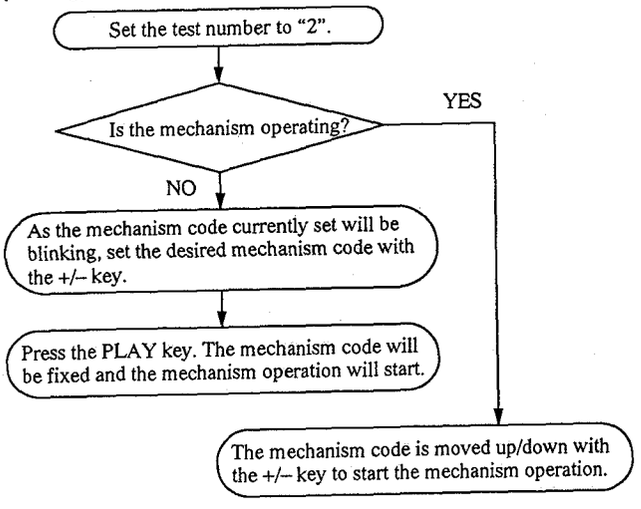
Mechanism Operation Mode List

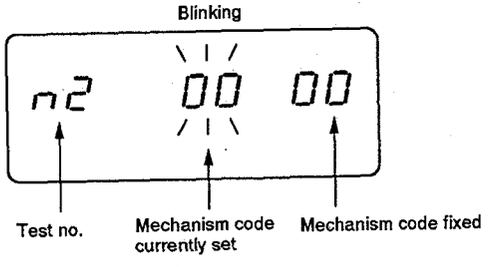
Mechanism Operation Mode	Contents
01	STOP
02	FWD×1 (Standard speed)
03	FWD×2 (CUE)
04	FWD×4 (Approx. ×4 speed FORWARD)
05	FWD×8 (Approx. ×8 speed FORWARD)
06	FF
07	RVS×1 (Standard speed)
08	RVS×2 (REVIEW)
09	RVS×4 (Approx. ×4 speed REVERSE)
10	RVS×8 (Approx. ×8 speed REVERSE)
11	REW

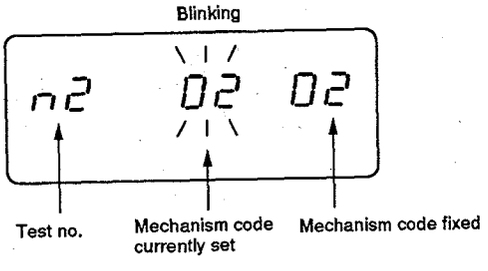
3-6. Mechanism Individual Operation Mode (No Tape)=2

- The drum and reel motor operate individually. Set the mechanism operation with the keys.

(Setting)


Set the test number to "2".
Is the mechanism operating?
YES
NO
As the mechanism code currently set will be blinking, set the desired mechanism code with the +/– key.
Press the PLAY key. The mechanism code will be fixed and the mechanism operation will start.
The mechanism code is moved up/down with the +/– key to start the mechanism operation.





Mechanism Code List

Mechanism Code	Contents
00~01	Drum FG servo 4000 rpm, reel motor STOP
02	Drum STOP, reel speed servo (Minimum speed in the LP mode)
03	Drum STOP, reel speed servo (Minimum speed in the SP mode)
04	Drum STOP, reel speed servo (Minimum speed in the wide track mode)
05	Drum STOP, reel speed servo (FWD×4)
06	Drum STOP, reel speed servo (FWD×8)
07	Drum STOP, reel speed servo (FWD×50)
08	Drum STOP, reel speed servo (RVS×1)
09	Drum STOP, reel speed servo (RVS×4)
10	Drum STOP, reel speed servo (RVS×8)
11	Drum STOP, reel speed servo (RVS×50)

Error Code List

Error Code	Contents	Mechanism Code (Detected or Not)	
		00 to 01	02 to 11
01	The drum motor is not rotating or the drum FG has not been detected	○	×
02	The reel motor is not rotating or the reel motor FG has not been detected	×	○
03	The drum motor speed is not stable	○	×
04	The reel motor speed is not stable	×	○
05	The tape top has not been detected	×	×
06	The tape end has not been detected	×	×
07	Tracking is not stable	×	×
08	The PLL does not lock	×	×

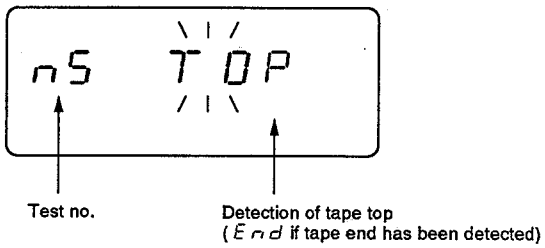
○ means error has been detected
× means no error has been detected

3-7. End Sensor Check Mode=5

〔**Note**〕 Use a blank tape.

- When the PLAY key is pressed in the stop state, the end sensor LED will blink in the period shown in Fig. (a). When the tape end is detected, "End" will be displayed on the LCD.
- When the FF key is pressed in the stop state, the end sensor LED will blink in the period shown in Fig. (b). When the tape end is detected, "End" will be displayed on the LCD.
- When the REW key is pressed in the stop state, the end sensor LED will blink in the period shown in Fig. (b). When the tape top is detected, "TOP" will be displayed on the LCD.
- No mechanism operation.
- CAUTION will not be detected.

(LCD display in the test mode)



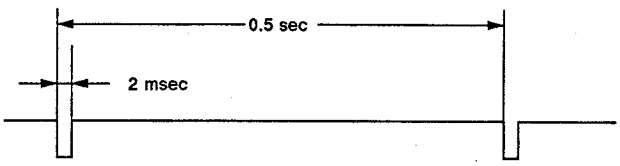


Fig. (a). When FWD×1 (PB)

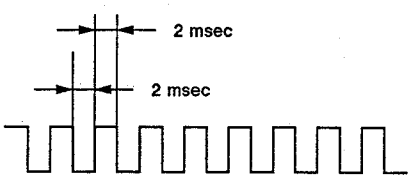


Fig. (b). Other than FWD×1

SECTION 4
MECHANICAL ADJUSTMENTS

Precautions

1. Input a DC 3.0V power supply to the DC IN 3V jack.
2. To clean the drum, moisten a chamois leather (2-034-697-00) or cloth (knit) that has been folded into fours with alcohol slightly, press it lightly against the drum and rotate the drum in the counterclockwise direction (2 to 3 times).

Torque Check

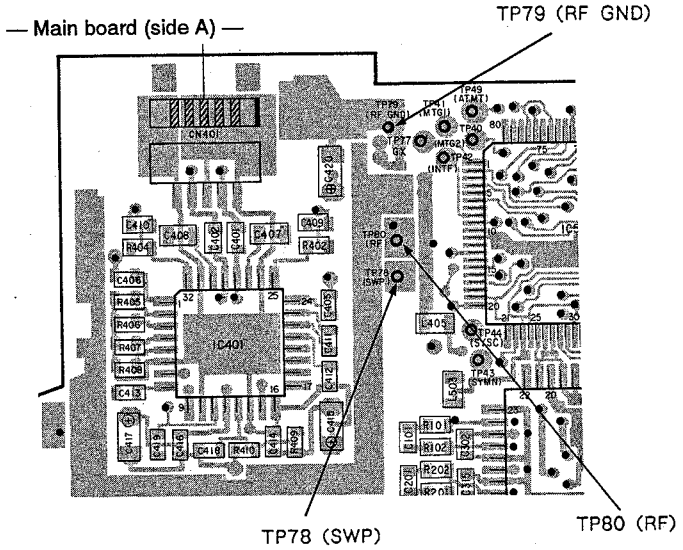
Torque	Torque Meter	Reading the
FWD (▶) back tension	TW-7131 (8-909-708-71)	3.5 to 5.5g • cm (S side)
REVIEW (⏮=▶+◀◀) back Tension	TW-7131 (8-909-708-71)	0.5 to 1.5g • cm (T side)

Tape Path Adjustment

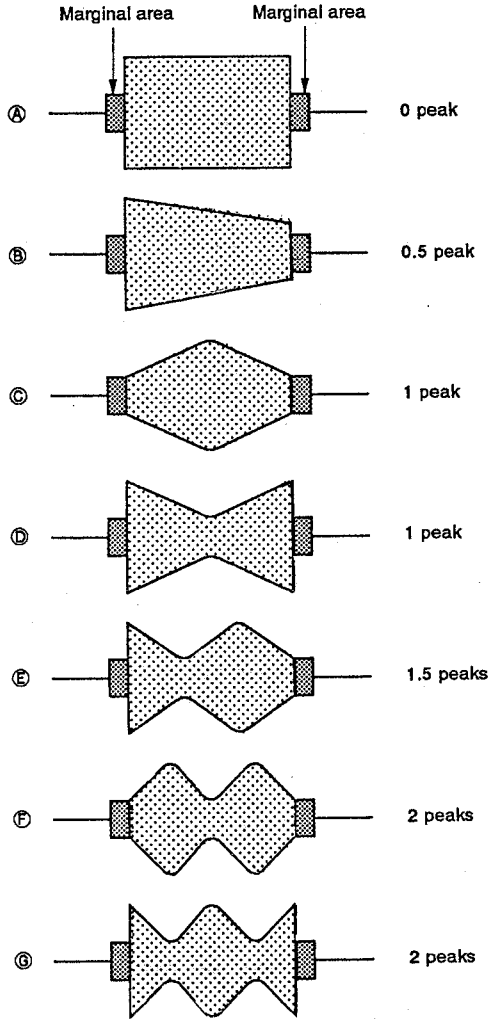
Be sure to perform this adjustment when the drum, S side roller guide section parts and T side roller guide section parts are replaced.

Procedure:

1. Remove the cassette lid assembly and case assembly.
2. Connect CH1 of an oscilloscope to TP80 (RF) and TP79 (RF GND) of the main board, then CH2 (trigger) to TP78 (SWP).



3. Load the test tape TY-7231 (8-119-874-00) and press PLAY (▶).
4. Check that the waveform of the oscilloscope (RF signal) becomes Ⓐ, Ⓑ, Ⓒ, Ⓓ, Ⓔ, Ⓕ, or Ⓖ shown in Fig. 1 (There must be two peaks or less and the marginal area must appear as well.).
   If the specification is not satisfied, perform adjustments from step 5.
   If the specification is satisfied, perform adjustments from step 7.



- There must be two peaks or less and the marginal area must appear as well.
- Approximate upper waveform value: 0.4 to 0.6 mV when the waveform is most spread.

Fig. 1.

5. Adjust the T side roller guide so that the marginal area appears at the right side of the RF signal (approx. 0.2 msec.). (Perform the adjustment 10 sec. after pressing PLAY (▶).)

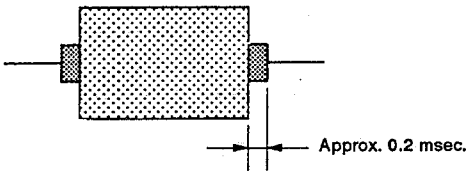


Fig. 2.

6. Adjust the S side roller guide so that the RF signal becomes Ⓐ, Ⓑ, Ⓒ, Ⓓ, Ⓔ, Ⓕ, or Ⓖ shown in Fig. 1
7. Press REW (◀◀) and check that the marginal area appears at the left side of the RF signal (approx. 0.2 msec.). If it does not appear, rotate the S side and T side roller guides in the counterclockwise direction by approximately 1/4.
   Press the REW (◀◀) again and check that the marginal areas appear at both the right and left sides of the waveform.
8. When the following modes are set, check that the RF waveform satisfies the following conditions.
   In PLAY (▶): There are two peaks or less and the marginal area must appear as well.
   In CUE (▶▶|), REVIEW (|◀◀), FF (▶▶|), or REW (◀◀): The marginal area appears.

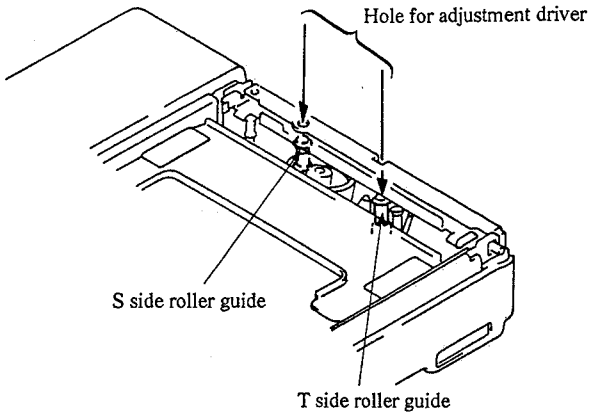
PLAY (▶)
↓
STOP (■)*
↓
PLAY (▶)
↓
STOP (■)*
↓
EJECT (← OPEN)*
↓
LOAD*
↓
PLAY (▶)
↓
CUE (▶▶|)
↓
PLAY (▶)
↓

REVIEW (|◀◀)
↓
PLAY (▶)
↓
STOP (■)*
↓
FF (▶▶)
↓
PLAY (▶)
↓
STOP (■)*
↓
REW (◀◀)
↓
PLAY (▶)

*: The RF waveform does not appear.

9. Press EJECT (← OPEN) and eject the test tape.
10. Remove the oscilloscope, and attach the cassette lid assembly and case assembly.

Adjustment Location:



SECTION 5
IC PIN FUNCTIONS

IC401 PLAYBACK EQUALIZER AMPLIFIER (CXA1354Q)

Pin No.	Pin Name	I/O	Function
1	HA A Vcc	–	Power supply pin of the Ach head amplifier and 2nd amplifier.
2	MP HIGH 2	–	Connects the resistor or current source for fixing the PCM EQ high band peak amount (For the Metal-Powder tape)
3	MP HIGH 1	–	Connects the resistor or current source for fixing the PCM EQ high band characteristics (For MP)
4	MP PHASE	–	Connects the resistor or current source for fixing the PCM EQ phase characteristics (For MP)
5	MP LOW	–	Connects the resistor or current source for fixing the PCM EQ low band characteristics (For MP)
6	PB GND		GND pin of parts other than the head amplifier, 2nd amplifier, and Limiter
7	EQ OUT	O	PCM EQ output pin
8	LIM IN	I	Limiter input pin
9	SWP OUT	O	Switching pulse output pin
10	LIM GND	–	Limiter GND pin
11	RFDT OUT	O	Limiter output pin
12	LIM Vcc	–	Limiter power supply pin
13	INT TC	–	Connects the integrating capacitor of the integrator.
14	PLCK IN	I	Signal input pin of the integrator
15	VREG OUT	–	Output pin of the regulator with decoupling capacitor
16	TAPE SW	–	Pin which switches the two EQ characteristics (For MP and Ba-Fe). Sets the EQ characteristics fixed by the external resistor of Pins ② to ⑤ when low and Pins ⑰ to ⑳ when high
17	BF HIGH 2	–	Connects the resistor or current source for fixing the PCM EQ high band peak amount (For Ba-Fe)
18	BF HIGH 1	–	Connects the resistor or current source for fixing the PCM EQ high band characteristics (For Ba-Fe)
19	BF PHASE	–	Connects the resistor or current source for fixing the PCM EQ phase characteristics (For Ba-Fe)
20	BF LOW	–	Connects the resistor or current source for fixing the PCM EQ low band characteristics (For Ba-Fe)
21	PB Vcc	–	Power supply pins of other than the head amplifier, 2nd amplifier and Limiter
22	EQ IN	I	EQ input pin
23	SW OUT	O	Switcher amplifier output pin
24	HA B Vcc	–	Power supply pins of the Bch head amplifier and 2nd amplifier
25	HA B OUT	O	Output pin of the Bch head amplifier
26	HA B GND	–	GND pin of the Bch head amplifier and 2nd amplifier
27	HA B PC	–	Pin which connects the emitter pass capacitor of the first emitter-earthed transistor of the Bch head amplifier
28	HA B IN	I	Input pin of the Bch head amplifier
29	HA A IN	I	Input pin of the Ach head amplifier
30	HA A PC	–	Pin which connects the emitter pass capacitor of the first emitter-earthed transistor of the Ach head amplifier
31	HA A GND	–	GND pin of the Ach head amplifier and 2nd amplifier
32	HA A OUT	O	Output pin of the Ach head amplifier

IC501 DAT SIGNAL PROCESSING FOR PLAYBACK EXCLUSIVELY (CXD2606R)

Pin No.	Pin Name	I/O	Function
1	TX	O	Digital out
2	BCK	O	BCK output pin (64×fs)
3	XBCK	O	BCK reverse output pin (64×fs)
4	DADT	O	DA data output pin
5	WCK	O	WCK output pin
6	LRCK 1	O	LRCK output pin (1)
7	LRCK 2	O	LRCK output pin (2)
8	INTF	O	DA data interpolation recognition signal output pin. "H": Interpolation
9	MUTE	I	DA data mute signal input pin. "H": Mute
10	Vss	–	GND
11	LSBF	I	DA data LSB/MSB first select signal. "H": LSB first, "L": MSB first
12	CSPW	O	PWM output pin for controlling the capstan speed
13	CBPW	O	PWM output pin for controlling the capstan bias
14	CPPW	O	PWM output pin for controlling the capstan phase
15	DSPW	I/O	PWM output pin for controlling the drum speed (MTCL ⑲=when "H") [Note 1]
16	DBPW	I/O	PWM output pin for controlling the drum bias (MTCL ⑲=When "H") [Note 1]
17	FLGC	O	CRC results monitor output pin
18	ERIH	O	Erasure correction state monitor output pin. "H": Erasure prohibited
19	MTCL	I	System motor select signal input pin. "H": 2 motors, "L": 1 motor
20	SPD1	I	Capstan speed select signal input pin (1)
21	SPD2	I	Capstan speed select signal input pin (2)
22	FDRV	I	Tape running direction select signal input pin. "H": REV, "L": FWD
23	CMTR	I	Capstan motor ON/OFF signal input pin. "H": ON, "L": OFF
24	DMTR	I	Drum motor ON/OFF signal input pin. "H": ON, "L": OFF
25	FGSG	I	Capstan FG input pin
26	FGL1	I	Capstan FG frequency division ratio setting data input pin (1)
27	FGL2	I	Capstan FG frequency division ratio setting data input pin (2)
28	SBDT	I/O	Microprocessor interface data input/output pin
29	EXCK	I	Clock input pin for the microprocessor interface
30	$\overline{\text{SBEN}}$	I	Microprocessor interface enable signal input pin. "L": Enable
31	V_{DD}	–	Power supply (+5V)
32	SBSY	O	Sync signal output pin for the microprocessor interface
33	SYSC	O	ECC start timing signal output pin. "L": Ach, "H": Bch
34	SYNM	O	C1 syndrome monitor output pin
35	CHER	I	Error correction strategy setting input pin
36	XRST	I	Chip reset input pin. "L": Reset
37	DRSW	I	Drum normal rotation/reverse rotation recognition signal input pin. "H": Normal rotation, "L": Reverse rotation
38	EMP	O	Emphasis ON/OFF output pin. "H": Emphasis ON
39	TRPH	O	Track pitch recognition signal output pin
40	STID	O	Start ID monitor output pin
41	SKID	O	Skip ID monitor output pin
42	FMID	O	Format ID monitor output pin
43	LPSP	O	Playback mode recognition signal output pin. "L": SP, "H": LP
44	PLCK	O	PLL CK output pin
45	SWP	I	Switching pulse input pin. "L": Ach, "H": Bch

Pin No.	Pin Name	I/O	Function
46	RFDT	I	RF input pin
47	TST 1	I	Test input pin (1). Fixed at "L"
48	XT1I	I	Crystal input pin (49.152 MHz)
49	XT1O	O	Crystal output pin (49.152 MHz)
50	Vss	–	GND
51	XT2I	I	Crystal input pin (22.5792 MHz)
52	XT2O	O	Crystal output pin (22.5792 MHz)
53	TST 2	I	Test input pin (2). Fixed at "L"
54	MTG 1	O	Signal output pin for inputting the error monitor data (1)
55	MTG 2	O	Signal output pin for inputting the error monitor data (2)
56	XOE	O	External RAM XOE output pin
57	XWE	O	External RAM XWE output pin
58	XRAS	O	External RAM XRAS output pin
59	XCAS	O	External RAM XCAS output pin
60~68	A8~A0	O	Address bus
69	D 0	I/O	Data bus 0
70	D 1	I/O	Data bus 1
71	VDD	–	Power supply (+5V)
72	D 2	I/O	Data bus 2
73	D 3	I/O	Data bus 3
74	ATT	I	Attenuator input pin
75	ERMN	I/O	CRC state monitor output pin (When FSSL ⑰ ="L") [Note 2]
76	ATMT	I/O	Auto mute monitor output pin (When FSSL ⑰ ="L") [Note 2]
77	FSSL	I	Fs information setting input pin
78	MCLK	O	Internal system clock output pin
79	F256	O	256×fs output pin
80	F128	O	128×fs output pin

[Note 1] DSPW and DBPW become the PLL lock range switching signal when MTCL is "L" and DMTR is "H". The following lock ranges can be set.

DSPW ⑮	DBPW ⑯	Lock Range
0	0	± 16%
0	1	− 34-+4%
1	0	− 5-+39%
1	1	± 22%

When DMTR is "L", "H" will be output for both.

[Note 2] When FSSL is "H", ERMN and ATMT become the input pins for setting the Fs information. The settings are as follows.

ERMN ⑮	ATMT ⑯	Fs Information
0	0	48kHz
1	0	44.1kHz
0	1	32kHz
1	1	–

IC503 SYSTEM CONTROL (CXP80620-457R)

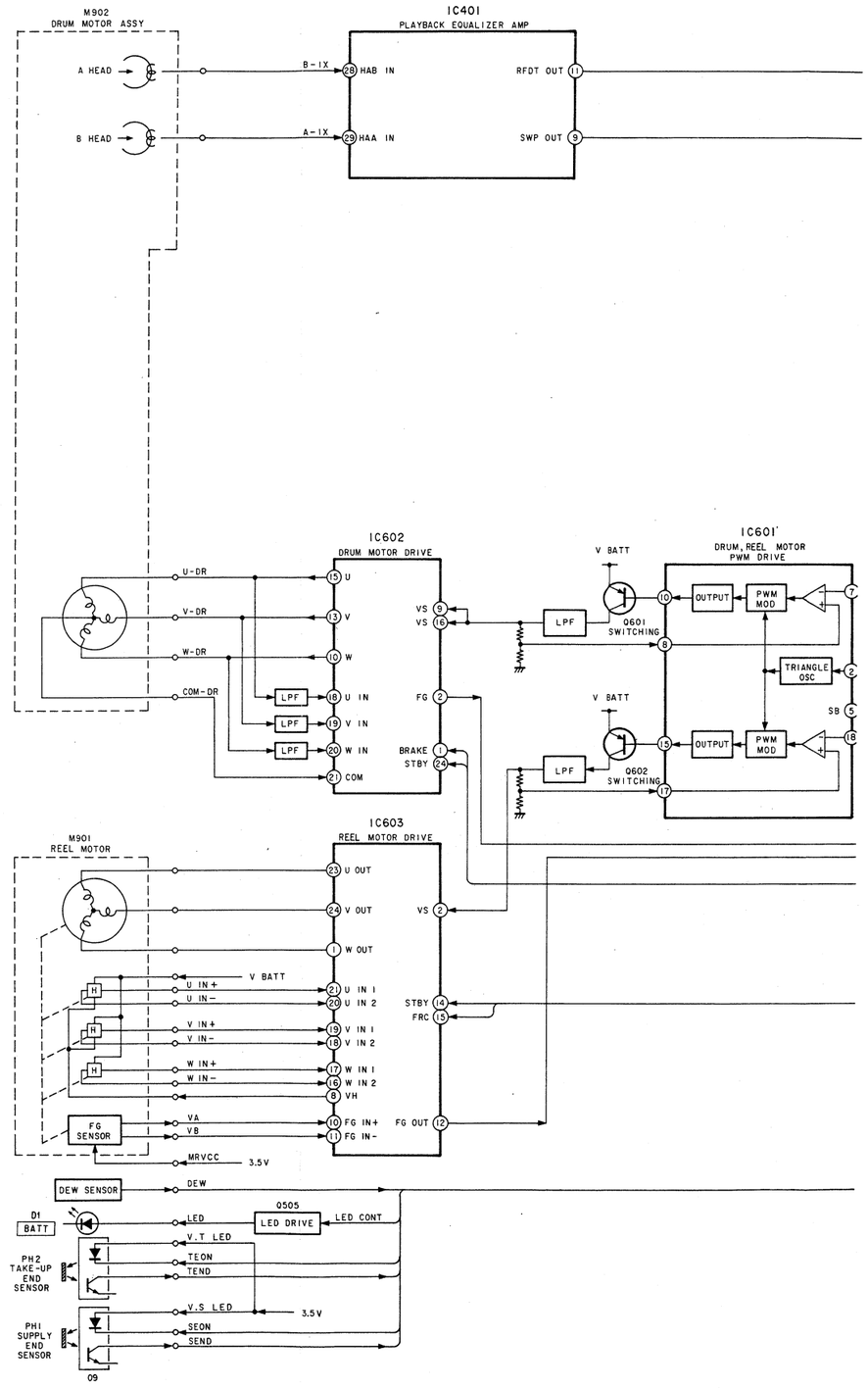
Pin No.	Pin Name	I/O	Function
1	KATO 1	O	PWM IC pass circuit ON/OFF control signal (PLAY : "H", FF/REW : "L") (Not used)
2	DRMBRAKE	O	Drum motor brake signal
3	PWM-EN	O	PWM IC pass circuit ON/OFF control signal (PLAY : "H", FF/REW : "L") (Not used)
4	DDCONT	O	Main DC/DC converter ON/OFF control signal
5	NC	O	Not used
6	NC	O	Not used
7	LOAD	O	Loading switch input ("L": ON)
8	SEL LOAD	O	Pin for determining whether momentary tape-up is performed or not immediately after loading. Not tape-up when "H", tape-up when "L". (Fixed at "L" in this unit.)
9	ATMT	I	Muting monitor input ("H": Muting)
10	NC	O	Not used
11	NC	O	Not used
12	NC	O	Not used
13	ATT	O	VOLUME selection switch output
14	NC	O	Not used
15	NC	O	Not used
16	NC	O	Not used
17	LCDCS	O	Chip select output to the LCD driver ("L": Select)
18	NC	O	Not used
19	NC	O	Not used
20	WAKE-UP2	O	Wake-up signal input
21	NC	O	Not used
22	NC	O	Not used
23	22M	O	22 MHz oscillation selection switch output
24	49M	O	49 MHz oscillation selection switch output
25	NSMD	O	Noise shaper selection switch output
26	NC	O	Not used
27	NC	O	Not used
28	NC	O	Not used
29	NC	O	Not used
30	NC	O	Not used
31	NC	O	Not used
32	NC	O	Not used
33	TEON	O	Take-up side end sensor LED ON/OFF control signal ("H": OFF)
34	TEON	O	Take-up side end sensor LED ON/OFF control signal ("H": OFF)
35	SEON	O	Supply side end sensor LED ON/OFF control signal ("H": OFF)
36	SEON	O	Supply side end sensor LED ON/OFF control signal ("H": OFF)
37	MP	I	Not used
38	RST	I	Reset input
39	Vss	–	GND
40	XTAL	O	Crystal oscillation (6 MHz) output
41	EXTAL	I	Crystal oscillation (6 MHz) input
42	SBSY	I	Communication request signal from DSP (CXD2606R)
43	SBDT	I	Serial data input from DSP (CXD2606R)
44	SBDT	O	Serial data output to DSP (CXD2606R)
45	EXCK	O	Serial clock output to DSP (CXD2606R)

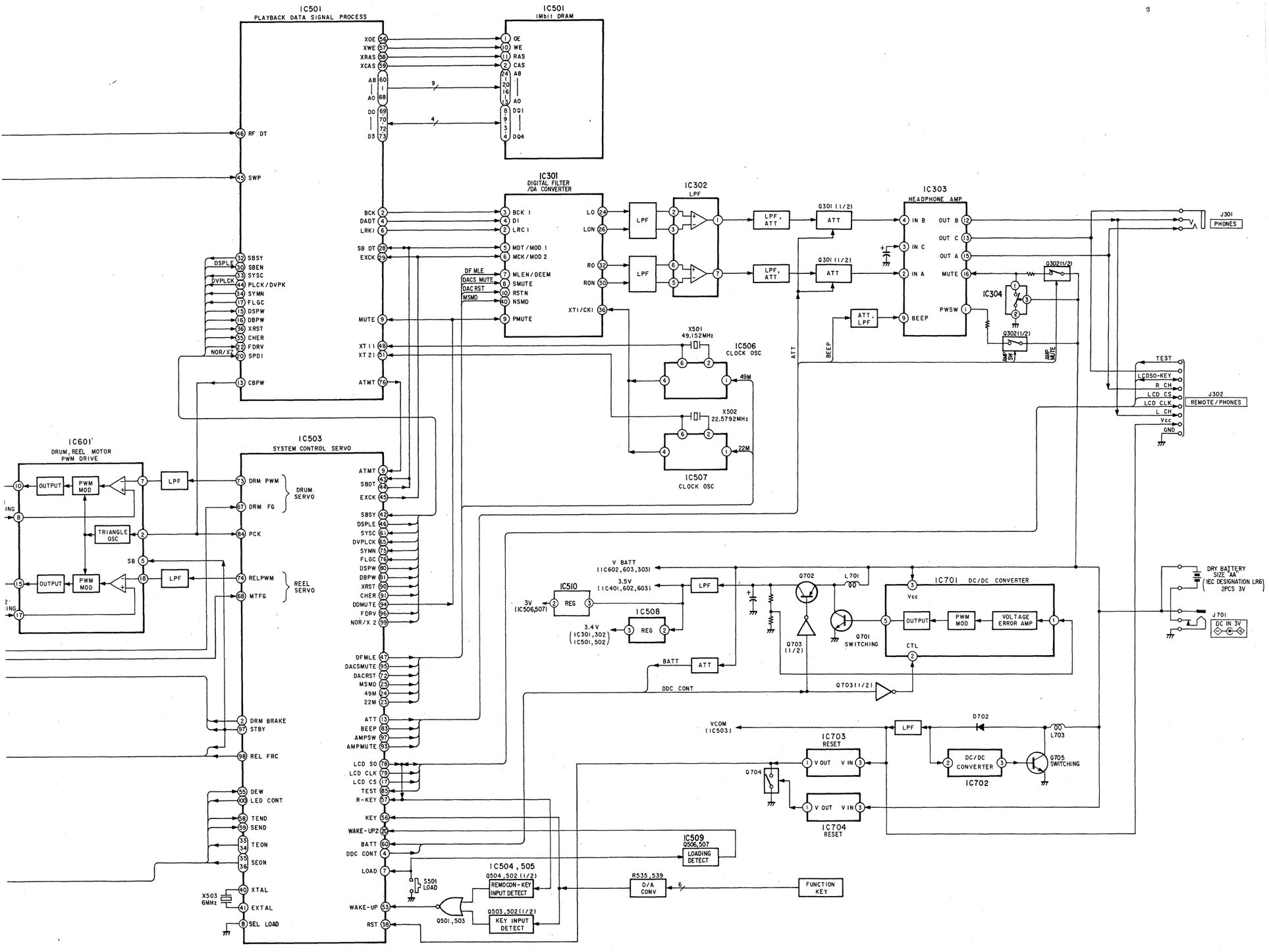
Pin No.	Pin Name	I/O	Function
46	DSPLE	O	DSP (CXD2606R) enable signal
47	DFMLE	O	Digital filter (SM5853AF) data enable signal
48	NC	–	Not used
49	NC	–	Not used
50	AVss	–	A/D converter GND
51	AVREF	–	A/D converter reference voltage
52	AVDD	–	A/D converter power supply
53	WAKE-UP	I	Wake-up signal input
54	HOLD	I	Not used
55	DEW	I	Dew detection signal input
56	KEY	I	Key input
57	R-KEY	I	Remote commander key input
58	TEND	I	Take-up side end sensor input
59	SEND	I	Supply side end sensor input
60	BATT	I	Battery voltage level detection
61	SYSC	I	Error code correction start timing signal input ("L": Ach, "H": Bch)
62	NC	I	Not used
63	NC	I	Not used
64	NC	I	Not used
65	DVPLCK	I	PLCK/DVPK input (PLL clock input)
66	GND	–	GND
67	DRMFG	I	Drum motor FG input
68	MTFG	I	Reel motor FG input
69	NC	O	Not used
70	NC	O	Not used
71	NC	O	Not used
72	DACRST	O	D/A converter (SM5853AF) reset signal
73	DRMPWM	O	PWM output for controlling the drum motor
74	RELPWM	O	PWM output for controlling the reel motor
75	SYMN	I	C1 syndrome pulse input
76	FLGC	I	C1 OK flag input
77	NC	O	Not used
78	LCDSO	O	Serial data output to the LCD driver
79	LCDCLK	O	Serial clock output to the LCD driver
80	DSPW	O	DSP (CXD2606R) PLL lock range selection signal output
81	DBPW	O	DSP (CXD2606R) PLL lock range selection signal output
82	NC	O	Not used
83	BEEP	O	Buzzer signal output
84	PCK	I	PWM clock input
85	TEST	I	Test mode selection ("L": Test Mode)
86	Vss	–	GND
87	VDD	–	Power supply
88	NC	–	Not used
89	FGL1	–	Not used
90	XRST	O	Reset signal to DSP (CXD2606R)

Pin No.	Pin Name	I/O	Function
91	CHER	O	Error correction mode selection signal
92	AMPSW	O	Headphone amplifier ON/OFF control signal ("H": OFF)
93	AMPMUTE	O	Headphone amplifier mute signal ("H": Mute)
94	DDMUTE	O	Digital mute signal ("H": Mute)
95	DACSMUTE	O	D/A converter mute signal ("H"=Mute)
96	FDRV	O	Tape running direction selection signal to DSP (CXD2606). ("L": FWD)
97	STBY	O	Standby signal to the motor driver IC
98	RELFRC	O	Reel motor running direction selection signal ("L": FWD)
99	NOR/ × 2	O	Capstan speed normal / ×2 speed selection ("L": Normal)
100	LEDCONT	O	POWER LED output ("L": LED lights up)

SECTION 6
DIAGRAMS

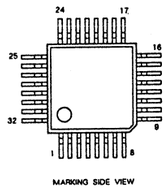
6-1. BLOCK DIAGRAM




IC501
PLAYBACK DATA SIGNAL PROCESS
IC501
1MbIt DRAM
XOE
XWE
XRAS
XCAS
A8 | A0
D0 | D3
OE
WE
RAS
CAS
A8 | A0
DQ1 | DQ4
RF DT
SWP
IC301
DIGITAL FILTER /DA CONVERTER
BCK
DADT
LRKI
SB DT
EXCK
BCK I
DI
LRC I
MDT/MOD 1
MCK/MOD 2
DF MLE
DACS MUTE
DACRST
MSMD
MLEN/DEEM
SMUTE
RSTN
NSMD
PMUTE
LO
LON
RO
RON
XTI/CKI
IC302
LPF
LPF, ATT
Q301 (1/2)
ATT
IC303
HEADPHONE AMP
IN B
IN C
IN A
BEEP
OUT B
OUT C
OUT A
MUTE
PWSW
J301
PHONES
Q302(1/2)
IC304
AMP SW
AMP MUTE
DSPLE
DVPLCK
NOR/X2
SBSY
SBEN
SYSC
PLCK/DVPK
SYMN
FLGC
DSPW
DBPW
XRST
CHER
FDRV
SPDI
CBPW
MUTE
XTI
XT2
ATMT
X501
49.152MHz
IC506
CLOCK OSC
49M
X502
22.5792MHz
22M
IC507
CLOCK OSC
TEST
LCDSO-KEY
R CH
LCD CS
LCD CLK
L CH
Vcc
GND
J302
REMOTE/PHONES
IC601
DRUM, REEL MOTOR PWM DRIVE
OUTPUT
PWM MOD
LPF
TRIANGLE OSC
DRUM SERVO
REEL SERVO
DRM PWM
DRM FG
PCK
RELPWM
MTFG
DRM BRAKE
STBY
REL FRC
DEW
LED CONT
TEND
SEND
TEON
SEON
XTAL
EXTAL
SEL LOAD
X503
6MHz
IC503
SYSTEM CONTROL SERVO
ATMT
SBDT
EXCK
SBSY
DSPLE
SYSC
DVPLCK
SYMN
FLGC
DSPW
DBPW
XRST
CHER
DDMUTE
FDRV
NOR/X2
DFMLE
DACSMUTE
DACRST
MSMD
49M
22M
ATT
BEEP
AMPSW
AMPMUTE
LCD SO
LCD CLK
LCD CS
TEST
R-KEY
KEY
WAKE-UP2
BATT
DDC CONT
LOAD
WAKE-UP
RST
S501
LOAD
IC504, 505
Q504, 502 (1/2)
REMOCON-KEY INPUT DETECT
Q503, 502 (1/2)
KEY INPUT DETECT
Q501, 503
R535, 539
D/A CONV
FUNCTION KEY
IC509
Q506, 507
LOADING DETECT
V BATT
(IC602, 603, 303)
3.5V
(IC401, 602, 603)
3V
(IC506, 507)
IC510
REG
IC508
REG
3.4V
(IC301, 302
IC501, 502)
Q702
L701
Q703 (1/2)
Q701
SWITCHING
IC701 DC/DC CONVERTER
Vcc
OUTPUT
PWM MOD
VOLTAGE ERROR AMP
CTL
BATT
ATT
DDC CONT
Q703(1/2)
VCOM
(IC503)
D702
L703
IC703
RESET
V OUT
V IN
Q704
DC/DC CONVERTER
IC702
Q705
SWITCHING
IC704
RESET
DRY BATTERY
SIZE "AA"
(IEC DESIGNATION LR6)
2PCS 3V
J701
DC IN 3V

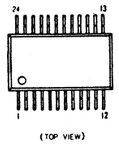
6-2. SEMICONDUCTOR LEAD LAYOUTS

CXA1354Q



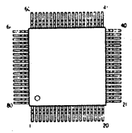
MARKING SIDE VIEW

CXA8022N-ELL2000
LB1882V-TLM
MB3796PFV-G-BND-ER
CXA8029N-TLM

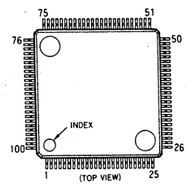


(TOP VIEW)

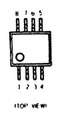
CXD2606R



CXP80620-457R

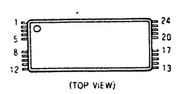


MB3776APNF-G-SNY-ER



(TOP VIEW)

MB81C4256A-80PFTN-LV

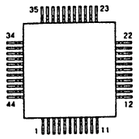


(TOP VIEW)

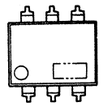
RH5RH352B-T1

DSM10C-TR

SM5853AF



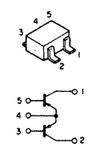
XC2141C62YMR
XC2141C64ZMR



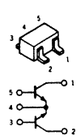
2SA1586-YG
2SB1295-UL6
2SD1819A-R
UN5115
UN5213

2SB1121-ST
2SC2982C-TE12L

XN1115
XN1401



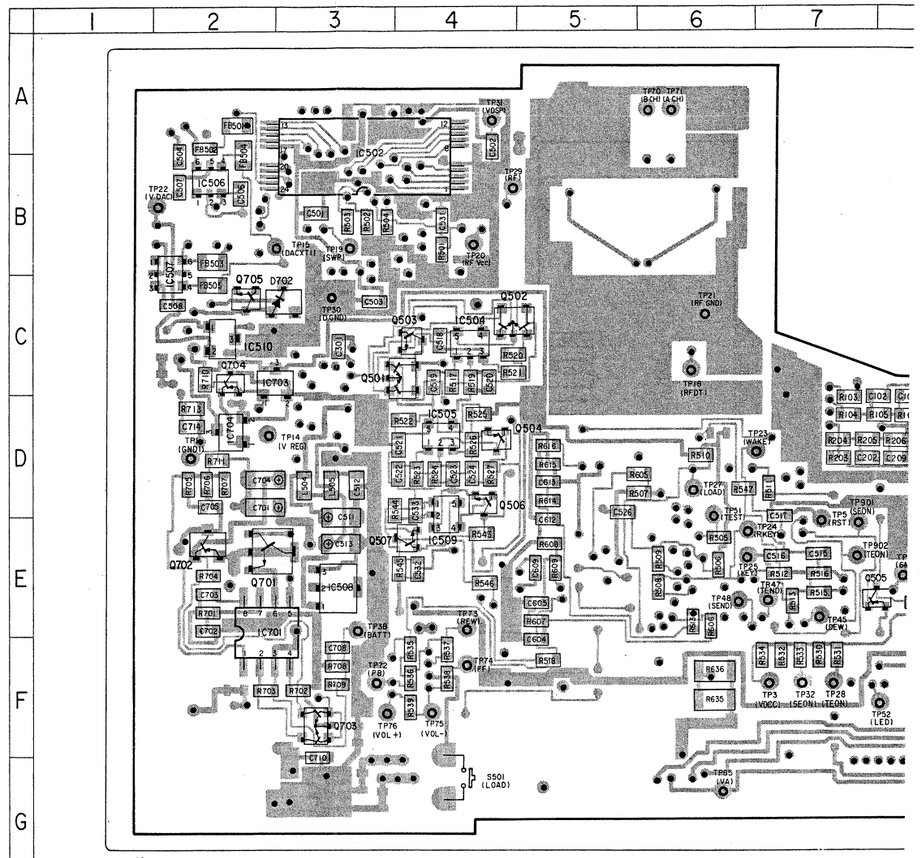
XN1213
XN1215
XN1504-TX



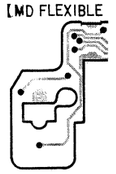
6-3. PRINTED WIRING BOARD

·Semiconductor Location

Ref. No.	Location
D1	I-13
D301	B-14
D601	E-21
D602	E-20
D701	E-22
D702	C-3
IC301	D-21
IC302	D-16
IC303	C-15
IC304	D-9
IC401	C-19
IC501	B-21
IC502	B-3
IC503	E-18
IC504	C-4
IC505	D-4
IC506	B-2
IC507	C-2
IC508	E-3
IC509	E-4
IC510	C-2
IC601	E-19
IC602	E-16
IC603	F-19
IC701	E-2
IC702	D-23
IC703	C-3
IC704	D-2
Q301	C-9
Q302	C-10
Q501	C-4
Q502	C-4
Q503	C-4
Q504	D-4
Q505	E-8
Q506	D-4
Q507	E-4
Q601	E-21
Q602	D-20
Q701	E-2
Q702	E-2
Q703	F-3
Q704	C-2
Q705	C-2



[MD FLEXIBLE



Note:

- ○—— : parts extracted from the components side.
- ● : Through hole.
- ⁘⁘ : Pattern on the side which is seen.

【MAIN BOARD】— SIDE B —

【MAIN BOARD】— SIDE A —

J302 REMOTE/PHONES

DRY BATTERY SIZE "AA" (IEC DESIGNATION LR6 2PCS, 3V)

J701 DC IN 3V

【SWITCH FLEXIBLE BOARD】

REW FF VOL

CN501

【MD FLEXIBLE BOARD】

M902 DRUM MOTOR

1-647-709 12

1-648-095 11

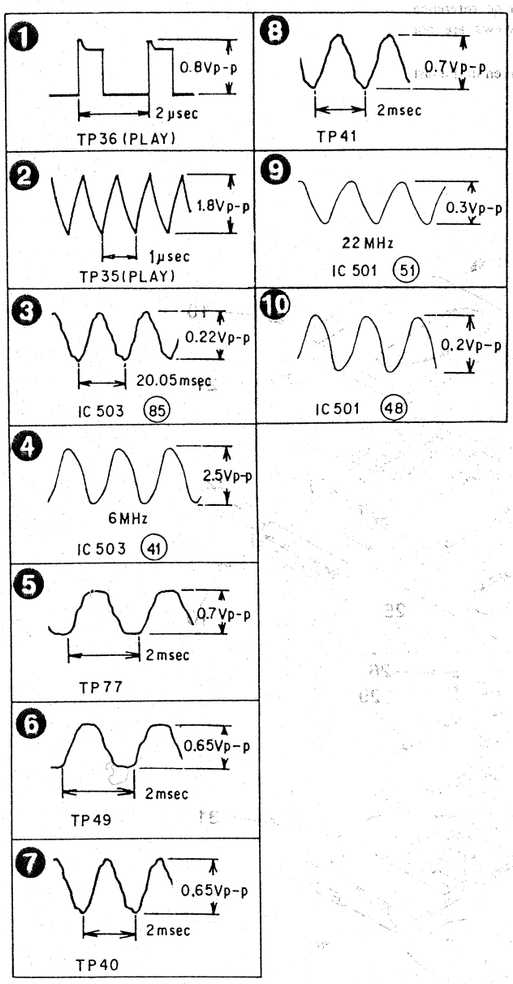
【MD FLEXIBLE BOARD】

PH2 PH1 DEW SENSOR DI BATT M901 REEL MOTOR

6-4. SCHEMATIC DIAGRAM

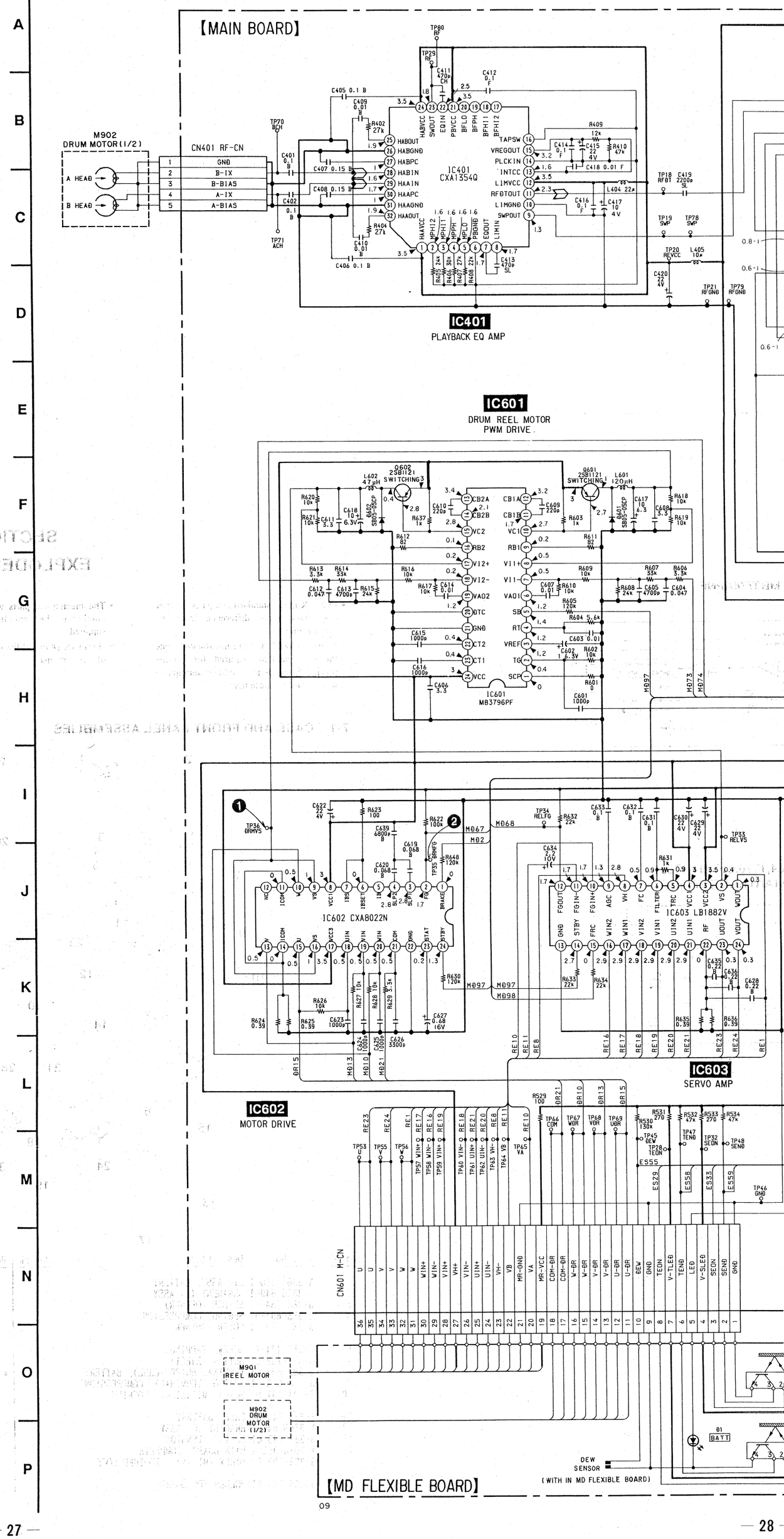
• See page 31 to 33 for IC Block Diagrams.

• Waveforms



Note:

- All capacitors are in µF unless otherwise noted. pF:µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ▭ : Panel designation.
- ▬ : B+ Line
- Voltage and waveforms are dc with respect to ground in playback mode.
- Voltages are taken with a VOM. Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ≫ : PB



IC502
MB81C4256A
IMbit DRAM

IC501
CXD2606R
DAT SIGNAL PROCESSING FOR PLAYBACK EXCLUSIVEIY

IC503
CXP80620-457R
SYSTEM CONTROLLER

IC506 IC507
CLOCK OSC

IC510
REG

IC508
REG

IC301
SM5853AF
DIGITAL FILTER /DA' CONVERTER

IC504
IC505
EX-OR GATE

IC509
EX-OR GATE

Q502-504
KEY INPUT DETECT

IC401
PLAYBACK EQ AMP

IC601
DRUM REEL MOTOR
PWM DRIVE

IC502
1Mbit DRAM

IC501
CXD2606R
DAT SIGNAL PROCESSING FOR
PLAYBACK EXCLUSIVEIY

IC301
SM5853AF
DIGITAL FILTI
/DA CONVERT

IC503
CXP80620-457R
SYSTEM CONTROLLER

IC603
SERVO AMP

DEW
SENSOR
(WITH IN MD FLEXIBLE BOARD)

PH1
SUPPLY END
SENSOR

PH2
TAKE-UP END
SENSOR

E BOARD]

【SWITCH FLEXIBLE BOARD】

X : CAN NOT BE MEASE

IC701 DC/DC CONVERTER

IC702 DC/DC CONVERTER

IC703 RESET

IC704 RESET

IC303 HEADPHONE AMP

IC304 RESET

IC302 AUDIO AMP

IC508 REG

IC509 EX-OR GATE

IC504 IC505 EX-OR GATE

IC506 IC507 CLOCK OSC

IC510 REG

IC301

0502 – 504 KEY INPUT DETECT

REMOTE / PHONES

PHONES

DC IN 3V

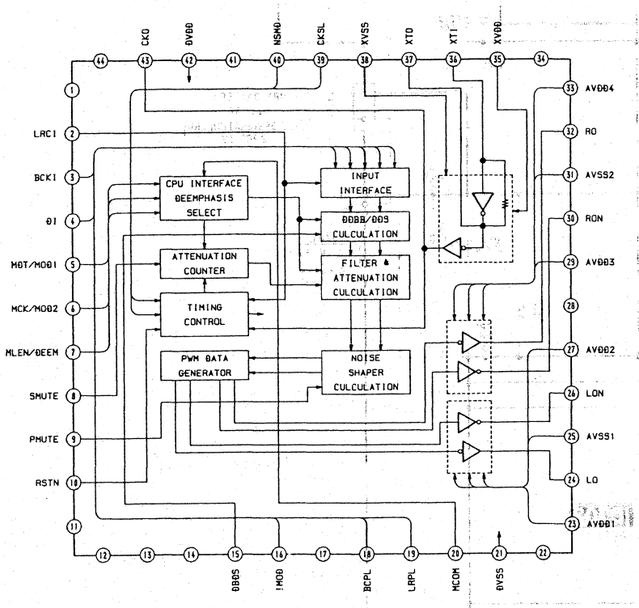
DRY BATTERY SIZE "AA" (IEC DESIGNATION LR6) 2PCS 3V

TOTAL CURRENT
PLAY 230mA
FF 300mA
REW 370mA
(TAPE TOP)

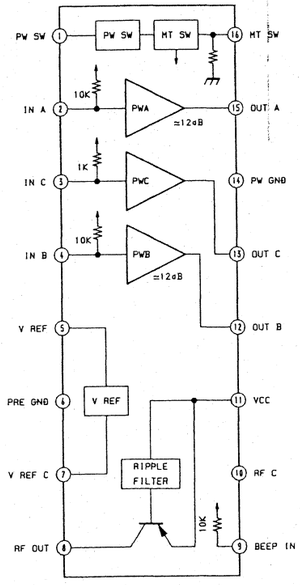
| | | |

6-5. IC BLOCK DIAGRAMS

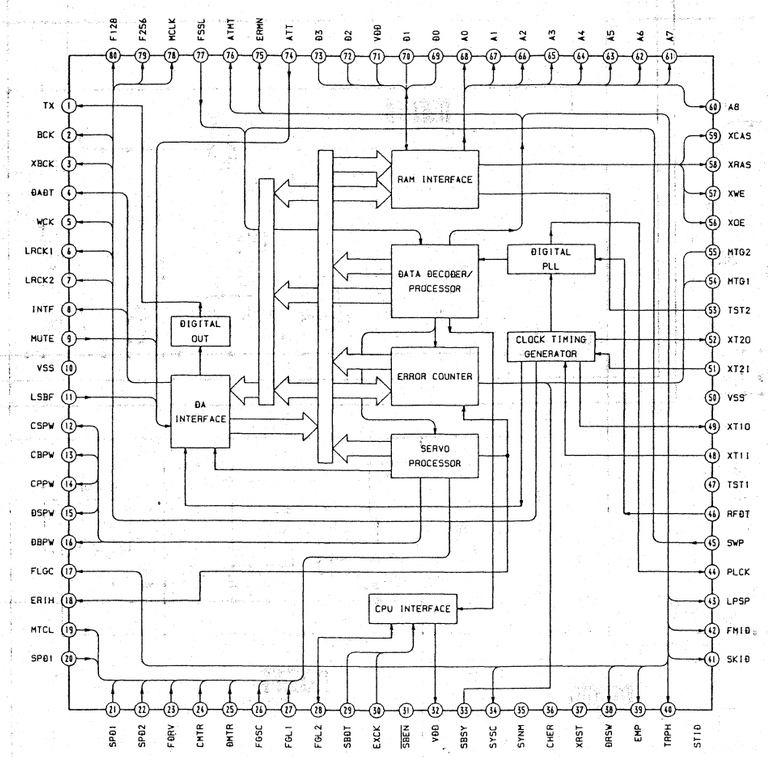
IC301 SM5853AF



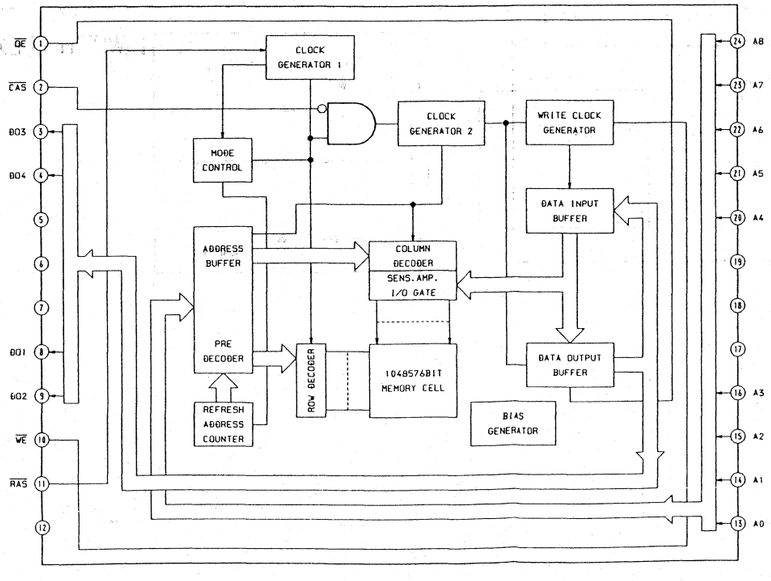
IC303 CXA8029N



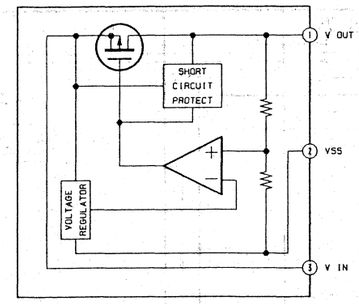
IC501 CXD2606R



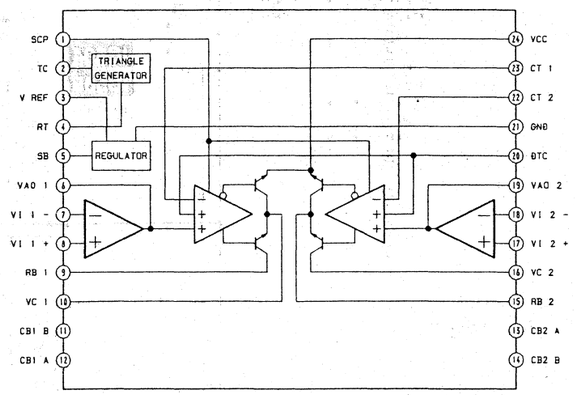
IC502 MB81C4256A



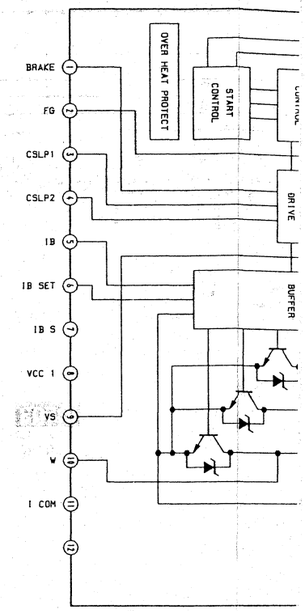
IC508 XC62AP3602P



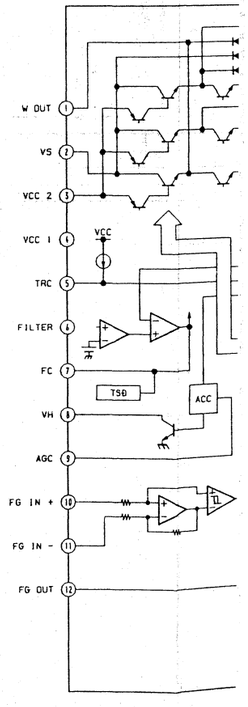
IC601 MB3796

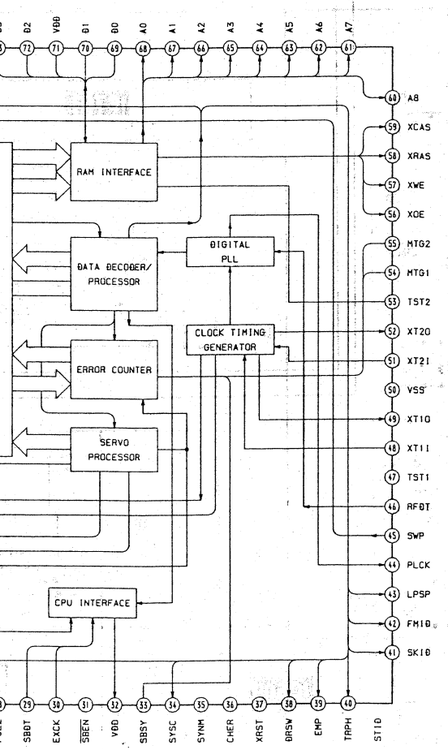


IC602 CXA8022N

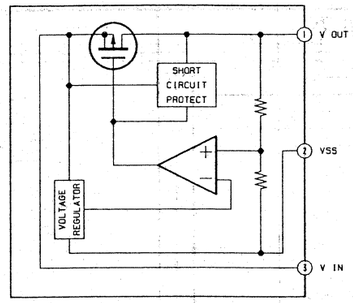


IC603 LB1882V

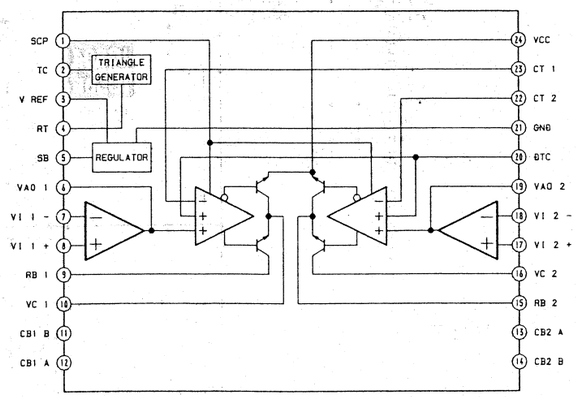




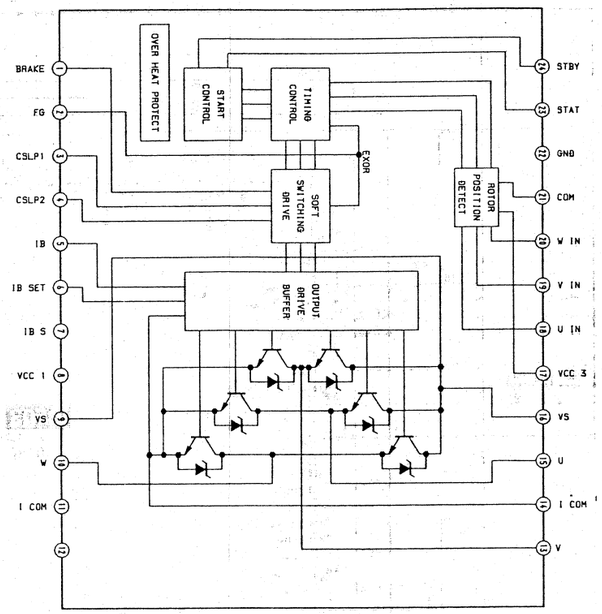
IC508 XC62AP3602P



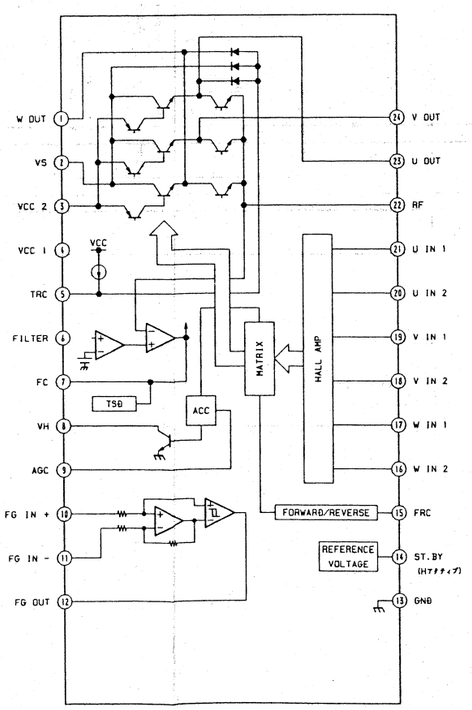
IC601 MB3796



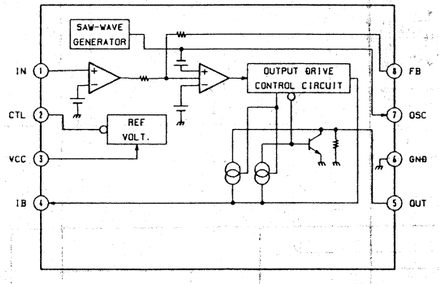
IC602 CXA8022N



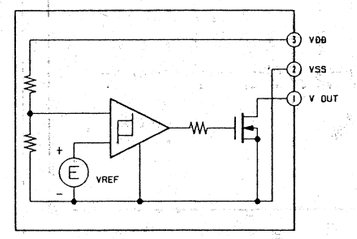
IC603 LB1882V

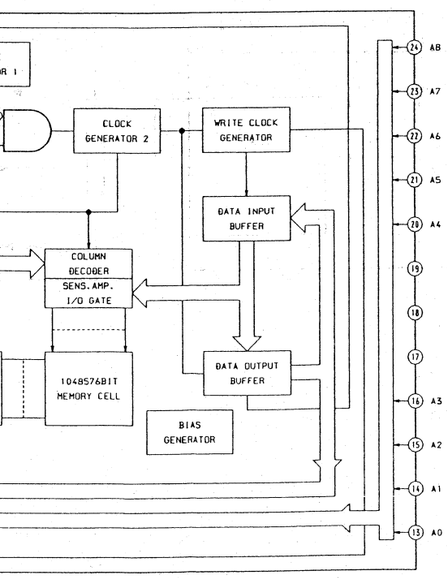


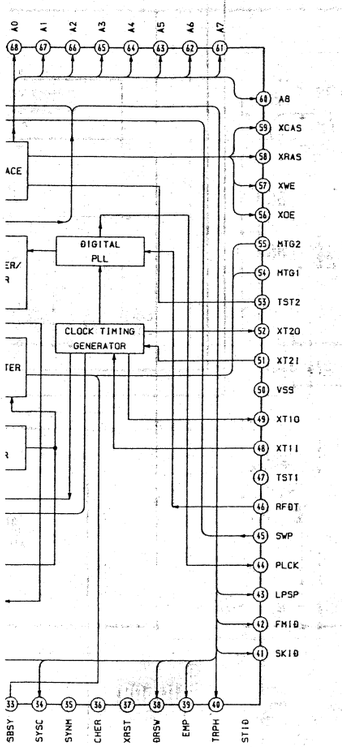
IC701 MB3776APNF

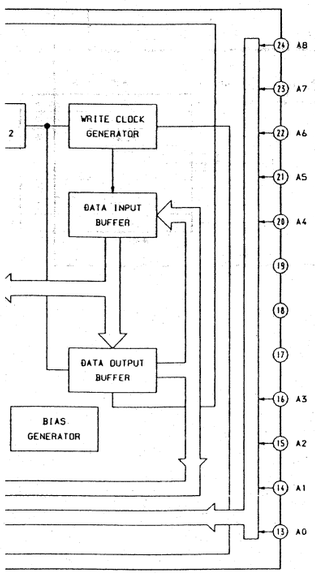


IC304, IC703, IC704, IC901 XC61AN1102MR/2712MR

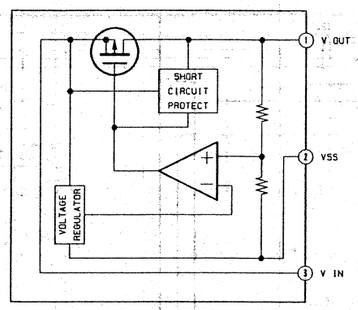




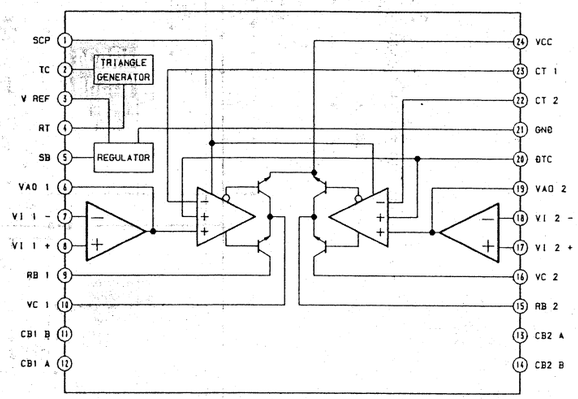




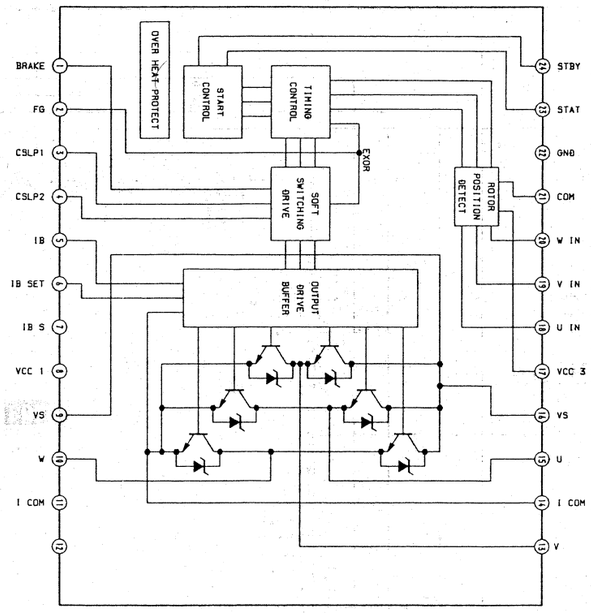
IC508 XC62AP3602P



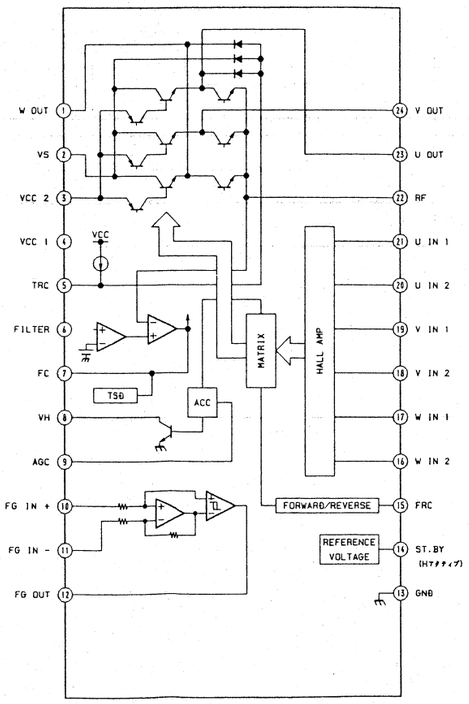
IC601 MB3796



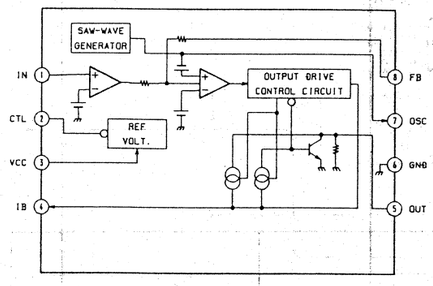
IC602 CXA8022N



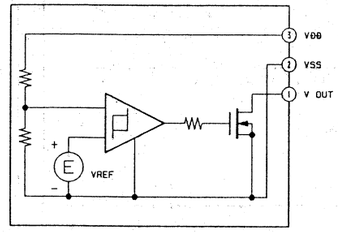
IC603 LB1882V



IC701 MB3776APNF



IC304, IC703, IC704, IC901 XC61AN1102MR/2712MR



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7-1. C

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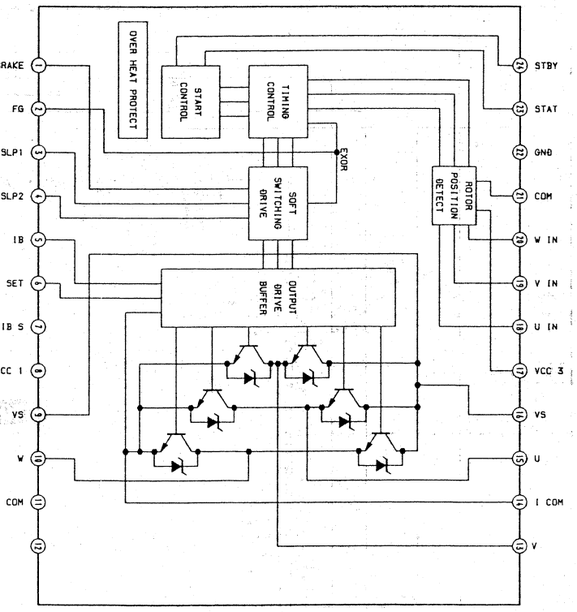
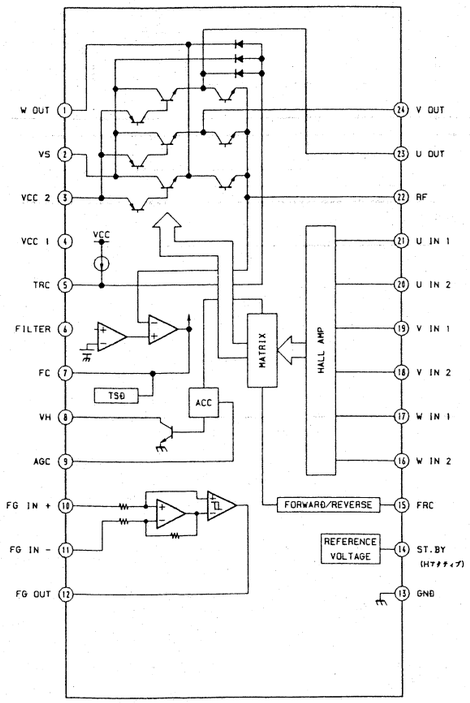
14	
15	
* 16	

IC602 CXA8022N



IC603 LB1882V



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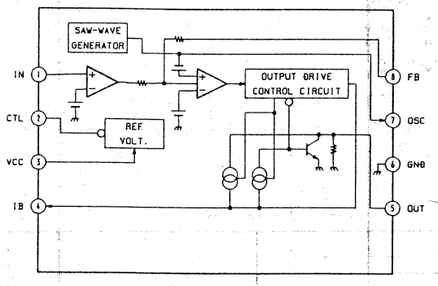
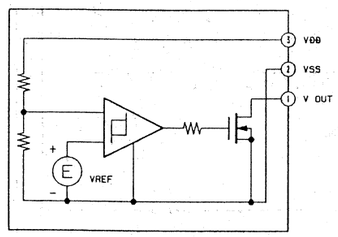


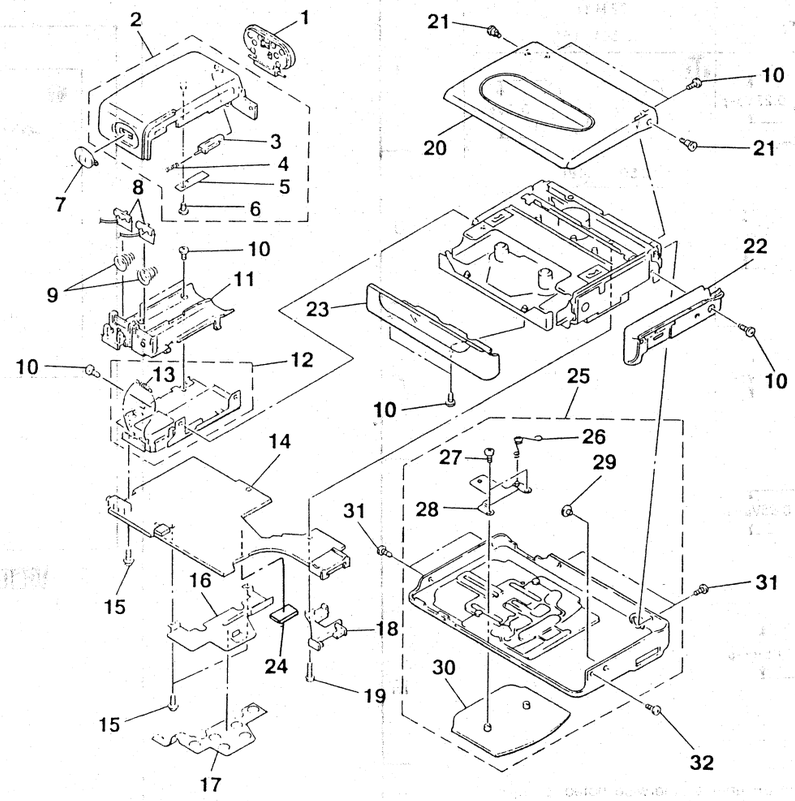
IC304, IC703, IC704, IC901
XC61AN1102MR/2712MR



SECTION 7
EXPLODED VIEWS

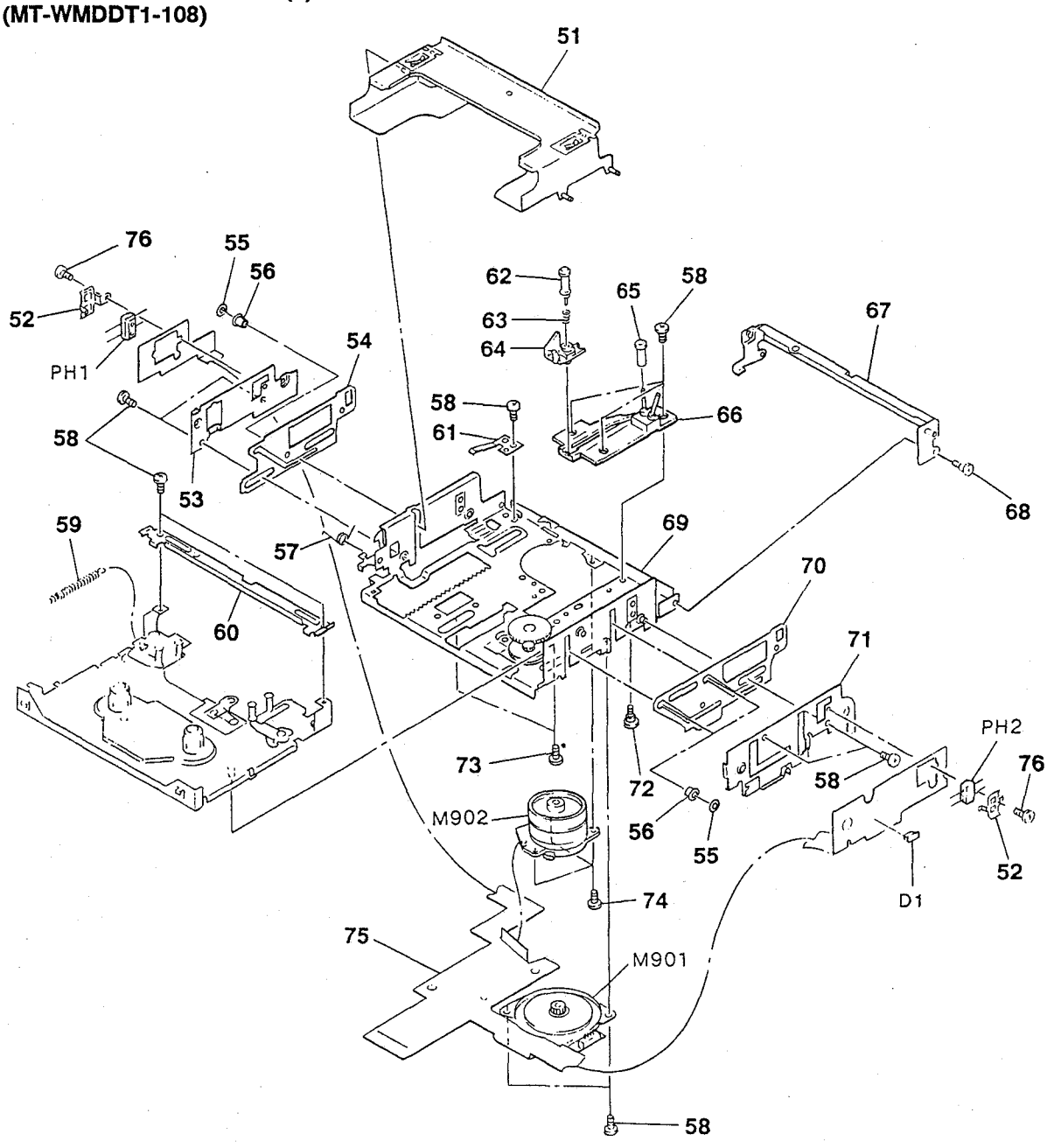
NOTE:
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

7-1. CASE AND FRONT PANEL ASSEMBLIES



Ref.No.	Part No.	Description	Remark
1	X-3366-650-1	LID ASSY, BATTERY	
2	X-3366-649-1	ORNAMENT (L) ASSY	
3	3-388-734-01	SLIDER (OPENER)	
4	3-388-697-01	SPRING, COMPRESSION	
5	3-388-699-01	COVER (OPENER)	
6	3-355-424-71	SCREW, TAPPING	
7	3-388-732-01	BUTTON (EJECT)	
8	3-388-694-01	TERMINAL BOARD (CASE), BATTERY	
9	3-388-695-01	SPRING (TERMINAL), COMPRESSION	
10	3-704-197-03	SCREW (M1.4X1.6), LOCKING	
11	3-388-744-01	CASE, BATTERY	
12	X-3366-646-1	BRACKET (C) ASSY	
13	3-388-685-01	SPRING, TENSION	
14	A-3016-352-A	MAIN BOARD, COMPLETE	
15	3-335-797-01	SCREW (M1.4X2), TOOTHED LOCK	
* 16	3-388-733-01	HOLDER (PC BOARD)	
17	1-648-095-11	SWITCH FLEXIBLE BOARD	
18	3-388-729-01	HOLDER (JACK)	
19	3-704-197-82	SCREW (M1.4X5.0), LOCKING	
20	X-3366-651-1	LID ASSY, CASSETTE	
21	3-704-260-51	SCREW (M1.4)	
22	3-388-745-01	ORNAMENT (R)	
23	X-3366-653-1	PANEL ASSY, FRONT	
* 24	1-648-481-11	RESET BOARD	
25	X-3366-652-1	CASE ASSY	
26	3-388-725-01	SPRING (CASE), TORSION	
27	3-894-747-01	SCREW (B1.4X2), TAPPING	
28	X-3366-645-1	SLIDER (COVER) ASSY	
29	3-388-714-01	HOLDER (LED)	
30	3-388-742-01	COVER	
31	3-704-197-23	SCREW (M1.4X2.5), LOCKING	
32	3-704-197-53	SCREW (M1.4X3.5), LOCKING	

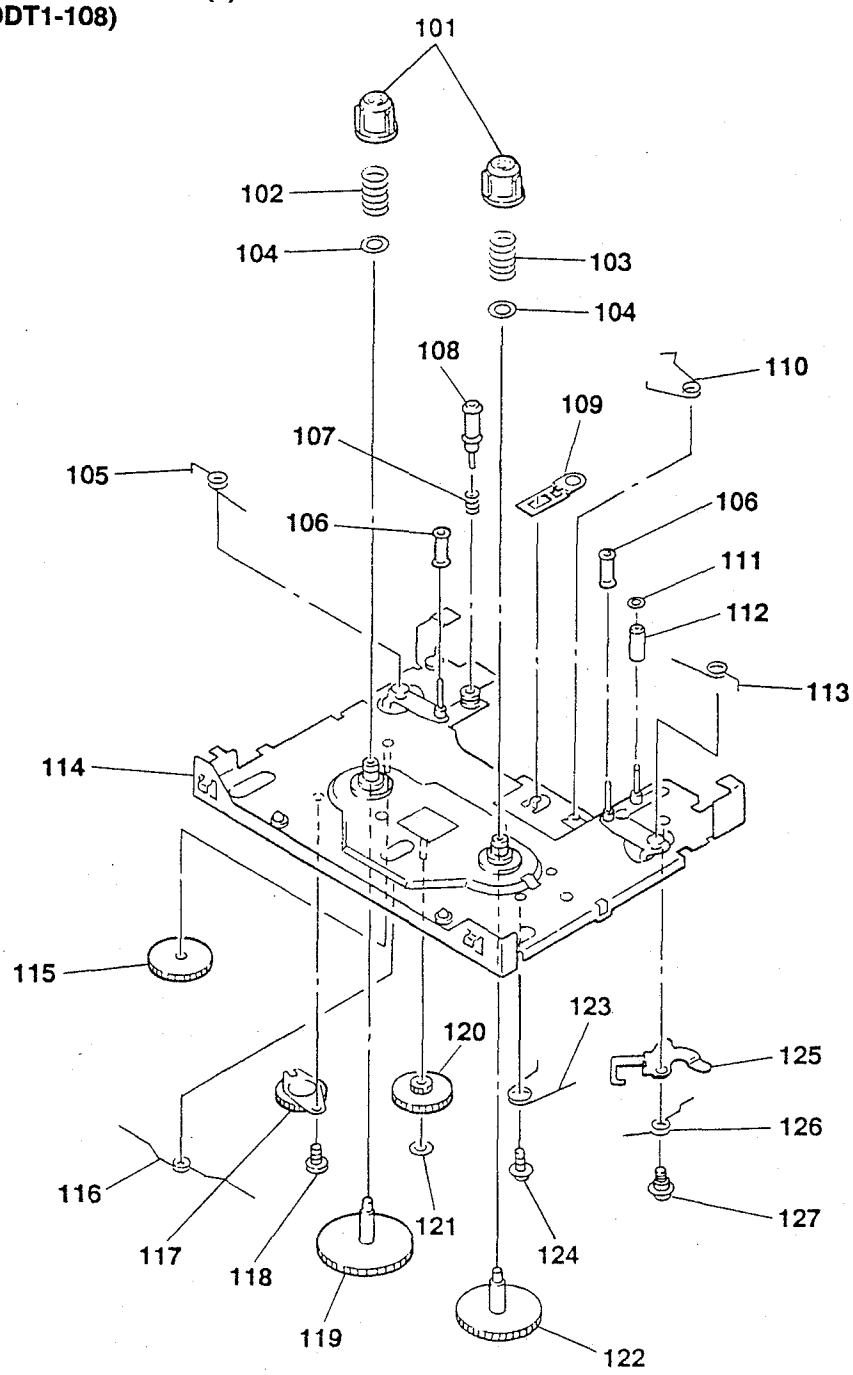
7-2. MECHANISM ASSEMBLY (1) (MT-WMDDT1-108)



Ref. No.	Part No.	Description	Remark
51	X-3366-654-1	HOLDER ASSY, CASSETTE	
52	3-388-769-01	HOLDER, SENSOR	
53	3-388-820-01	BRACKET (A)	
54	3-388-867-01	SLIDER (L)	
55	3-388-748-01	WASHER	
56	3-388-779-01	ROLLER	
57	3-388-759-01	SPRING (LOCK), TORSION	
58	3-389-523-06	SCREW (LOCK ACE)	
59	3-388-763-01	SPRING (SUB), TENSION	
60	3-388-825-01	OPENER, LID	
61	3-388-764-01	SPRING, POP UP	
62	X-3366-659-1	GUIDE ASSY, ROLLER	
63	3-388-738-01	SPRING (H), COMPRESSION	
64	X-3366-656-1	BASE ASSY, GUIDE	
65	3-388-812-01	GUIDE (F), ROLLER	
66	X-3366-657-1	SLOPE ASSY	

Ref. No.	Part No.	Description	Remark
67	X-3366-655-1	HOLDER ASSY	
68	3-352-005-01	SCREW(M1.4X1.6),PRECISION STEP	
69	X-3366-662-1	CHASSIS ASSY	
70	3-388-815-01	SLIDER (R)	
71	X-3366-644-1	BRACKET (B) ASSY	
72	3-704-260-21	SCREW (M1.4X1.1)	
73	3-349-825-61	SCREW	
74	3-389-523-16	SCREW (LOCK ACE)	
75	1-648-054-11	MD FLEXIBLE BOARD	
76	7-627-551-47	SCREW,PRECISION +P 1.4X1.4	
D1	8-719-404-19	DIODE LN1251C (BATT)	
M901	1-698-015-11	MOTOR (REEL)	
M902	8-848-601-11	DRUM ASSY (DOU-19A)	
PH1	8-719-031-97	DIODE NJL5134KL (S END SENSOR)	
PH2	8-719-031-97	DIODE NJL5134KL (T END SENSOR)	

7-3. MECHANISM ASSEMBLY (2) (MT-WMDDT1-108)



Ref. No.	Part No.	Description	Remark
101	3-388-816-01	TABLE, REEL	
102	3-388-720-01	SPRING (BT-S), COMPRESSION	
103	3-388-762-01	SPRING (BT-T), COMPRESSION	
104	3-388-811-01	WASHER (A)	
105	3-388-750-01	SPRING (L), TORSION	
106	3-388-737-01	GUIDE, ROLLER	
107	3-388-738-01	SPRING (H), COMPRESSION	
108	X-3366-659-1	GUIDE ASSY, ROLLER	
109	3-388-691-01	LEVER (BASE)	
110	3-388-753-01	SPRING (BASE), TORSION	
111	3-315-414-11	WASHER	
112	3-904-046-01	GUIDE (D), ROLLER	
113	3-388-751-01	SPRING (R), TORSION	
114	X-3366-663-1	CHASSIS ASSY, SUB	

Ref. No.	Part No.	Description	Remark
115	3-388-707-01	GEAR (PN)	
116	3-388-760-01	SPRING (LM), TORSION	
117	3-388-814-01	DAMPER	
118	3-331-008-01	SCREW (MI.4X1.1) (I), PRECISION	
119	X-3366-643-1	GEAR (S) ASSY	
120	3-388-704-01	GEAR (CTR)	
121	3-338-645-31	WASHER (0.8-2.5)	
122	3-388-708-01	GEAR (T)	
123	3-388-719-01	SPRING (BRAKE), TORSION	
124	3-389-523-03	SCREW (LOCK ACE)	
125	3-388-690-01	LEVER (Z)	
126	3-388-752-01	SPRING (Z), TORSION	
127	3-388-808-01	SCREW (MI.4)	

SECTION 8
ELECTRICAL PARTS LIST

MAIN

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Hardware (# mark) list is given in the last of this parts list.
- Items marked "＊" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Description			Remark
	A-3016-352-A	MAIN BOARD, COMPLETE			
		**********			
	3-904-936-01	CUSHION (E)			
		< CAPACITOR >			
C101	1-162-956-11	CERAMIC CHIP 180PF	5%	50V	
C102	1-162-956-11	CERAMIC CHIP 180PF	5%	50V	
C103	1-162-956-11	CERAMIC CHIP 180PF	5%	50V	
C104	1-162-928-11	CERAMIC CHIP 120PF	5%	50V	
C105	1-164-392-11	CERAMIC CHIP 390PF	5%	50V	
C106	1-135-151-21	TANTALUM CHIP 4.7uF	20%	4V	
C108	1-164-489-11	CERAMIC CHIP 0.22uF	10%	16V	
C109	1-162-928-11	CERAMIC CHIP 120PF	5%	50V	
C110	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	
C133	1-164-234-11	CERAMIC CHIP 1uF		10V	
C201	1-162-956-11	CERAMIC CHIP 180PF	5%	50V	
C202	1-162-956-11	CERAMIC CHIP 180PF	5%	50V	
C203	1-162-956-11	CERAMIC CHIP 180PF	5%	50V	
C204	1-162-928-11	CERAMIC CHIP 120PF	5%	50V	
C205	1-164-392-11	CERAMIC CHIP 390PF	5%	50V	
C206	1-135-151-21	TANTALUM CHIP 4.7uF	20%	4V	
C208	1-164-489-11	CERAMIC CHIP 0.22uF	10%	16V	
C209	1-162-928-11	CERAMIC CHIP 120PF	5%	50V	
C210	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	
C301	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C302	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C303	1-104-847-91	TANTAL. CHIP 22uF	20%	4V	
C304	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C305	1-124-576-11	ELECT 220uF	20%	4V	
C306	1-135-151-21	TANTALUM CHIP 4.7uF	20%	4V	
C307	1-135-151-21	TANTALUM CHIP 4.7uF	20%	4V	
C309	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C310	1-162-995-11	CERAMIC CHIP 0.022uF		50V	
C311	1-104-847-11	TANTAL. CHIP 22uF	20%	4V	
C312	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C313	1-135-218-11	TANTAL. CHIP 4.7uF	20%	2.5V	
C314	1-164-362-11	CERAMIC CHIP 470PF	5%	50V	
C315	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C316	1-162-915-11	CERAMIC CHIP 10PF	5%	50V	
C317	1-135-151-21	TANTALUM CHIP 4.7uF	20%	4V	
C401	1-164-360-11	CERAMIC CHIP 0.1uF	10%	25V	
C402	1-164-360-11	CERAMIC CHIP 0.1uF	10%	25V	
C405	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C406	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C407	1-164-492-11	CERAMIC CHIP 0.15uF	10%	16V	
C408	1-164-492-11	CERAMIC CHIP 0.15uF	10%	16V	
C409	1-162-970-11	CERAMIC CHIP 0.01uF	10%	25V	
C410	1-162-970-11	CERAMIC CHIP 0.01uF	10%	25V	
C411	1-164-315-11	CERAMIC CHIP 470PF	5%	50V	
C412	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C413	1-164-315-11	CERAMIC CHIP 470PF	5%	50V	
C414	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C415	1-104-847-11	TANTAL. CHIP 22uF	20%	4V	
C416	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C417	1-135-201-11	TANTALUM CHIP 10uF	20%	4V	
C418	1-162-970-11	CERAMIC CHIP 0.01uF	10%	25V	
C419	1-164-676-11	CERAMIC CHIP 2200PF	5%	16V	
C420	1-104-847-11	TANTAL. CHIP 22uF	20%	4V	
C501	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C502	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C503	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C504	1-162-970-11	CERAMIC CHIP 0.01uF	10%	25V	
C505	1-162-910-11	CERAMIC CHIP 5PF	0.25PF	50V	
C506	1-162-910-11	CERAMIC CHIP 5PF	0.25PF	50V	
C507	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C508	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C509	1-164-234-11	CERAMIC CHIP 1uF		10V	
C511	1-135-201-11	TANTALUM CHIP 10uF	20%	4V	
C512	1-164-234-11	CERAMIC CHIP 1uF		10V	
C513	1-135-201-11	TANTALUM CHIP 10uF	20%	4V	
C515	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C516	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C517	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C518	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C519	1-164-357-11	CERAMIC CHIP 1000PF	5%	50V	
C520	1-162-970-11	CERAMIC CHIP 0.01uF	10%	25V	
C521	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C522	1-164-357-11	CERAMIC CHIP 1000PF	5%	50V	
C523	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	
C524	1-164-357-11	CERAMIC CHIP 1000PF	5%	50V	
C525	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C526	1-164-670-11	CERAMIC CHIP 1200PF	5%	16V	
C527	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	
C528	1-162-953-11	CERAMIC CHIP 100PF	5%	50V	
C529	1-164-360-11	CERAMIC CHIP 0.1uF		16V	
C530	1-164-360-11	CERAMIC CHIP 0.1uF		16V	

MAIN

Ref.No.	Part No.	Description				Remark
C531	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V	
C532	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C533	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V	
C601	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C602	1-135-337-11	TANTAL. CHIP	1uF	20%	6.3V	
C603	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C604	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	
C605	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	
C606	1-104-927-21	CERAMIC CHIP	3.3uF		10V	
C607	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C608	1-104-927-21	CERAMIC CHIP	3.3uF		10V	
C609	1-162-957-11	CERAMIC CHIP	220PF	5%	50V	
C610	1-162-960-11	CERAMIC CHIP	220PF	10%	50V	
C611	1-104-927-21	CERAMIC CHIP	3.3uF		10V	
C612	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	
C613	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	
C614	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C615	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C616	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C617	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	
C618	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	
C619	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V	
C620	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V	
C622	1-104-847-11	TANTAL. CHIP	22uF	20%	4V	
C623	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C624	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C625	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C626	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V	
C627	1-135-226-21	TANTAL. CHIP	0.68uF	20%	16V	
C628	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	
C629	1-104-847-11	TANTAL. CHIP	22uF	20%	4V	
C630	1-104-847-11	TANTAL. CHIP	22uF	20%	4V	
C631	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C632	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C633	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C634	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V	
C635	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	
C636	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	
C639	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	
C701	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	
C702	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V	
C703	1-164-360-11	CERAMIC CHIP	0.1uF		16V	
C704	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	
C705	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	
C706	1-104-910-11	TANTAL. CHIP	15uF	20%	10V	
C707	1-104-752-11	TANTAL. CHIP	33uF	20%	6.3V	
C708	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	
C709	1-124-576-11	ELECT	220uF	20%	4V	
C710	1-164-360-11	CERAMIC CHIP	0.1uF		16V	
C711	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	
C712	1-104-910-11	TANTAL. CHIP	15uF	20%	10V	
C713	1-104-847-11	TANTAL. CHIP	22uF	20%	4V	
C714	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V	
		< CONNECTOR >				
CN401	1-569-252-21	HOUSING, CONNECTOR (FPC) 5P				
* CN501	1-750-373-21	CONNECTOR, FPC 8P				
* CN601	1-750-376-21	CONNECTOR, FPC 36P				
		< DIODE >				
D301	8-719-106-71	DIODE	RM12M-B2			
D501	8-719-938-75	DIODE	SB05-05CP			
D601	8-719-938-75	DIODE	SB05-05CP			
D602	8-719-938-75	DIODE	SB05-05CP			
D701	8-719-031-18	DIODE	DSM10C-TR			
D702	8-719-938-75	DIODE	SB05-05CP			
		< FERRITE BEAD >				
FB501	1-414-234-21	INDUCTOR, FERRITE BEAD				
FB502	1-414-229-21	INDUCTOR, FERRITE BEAD				
FB503	1-414-234-21	INDUCTOR, FERRITE BEAD				
FB504	1-414-234-21	INDUCTOR, FERRITE BEAD				
FB505	1-414-234-21	INDUCTOR, FERRITE BEAD				
FB506	1-414-235-21	INDUCTOR, FERRITE BEAD				
FB507	1-414-235-21	INDUCTOR, FERRITE BEAD				
		< IC >				
IC301	8-759-097-96	IC	SM5853AF			
IC302	8-759-710-55	IC	NJM2100M			
IC303	8-759-159-75	IC	CXA8029N-TLM			
IC304	8-759-173-00	IC	XC61AN1102MR			
IC401	8-752-039-32	IC	CXA1354Q			
IC501	8-752-352-26	IC	CXD2606R			
IC502	8-759-098-06	IC	MB81C4256A-80PFTN-LV			
IC503	8-752-848-30	IC	CXP80620-457R			
IC504	8-759-082-16	IC	SC14S70FE			
IC505	8-759-082-16	IC	SC14S70FE			
IC506	8-759-099-84	IC	XC2141C64ZMR			
IC507	8-759-099-85	IC	XC2141C62YMR			
IC508	8-759-167-04	IC	XC62AP3602PR			
IC509	8-759-082-16	IC	SC14S70FE			
IC510	8-759-192-18	IC	XC62AP3202MR			
IC601	8-759-094-01	IC	MB3796PFV-G-BND-ER			
IC602	8-759-094-02	IC	CXA8022N-ELL2000			
IC603	8-759-095-39	IC	LB1882V-TLM			
IC701	8-759-097-95	IC	MB3776APNF-G-SNY-ER			
IC702	8-759-183-31	IC	RH5RH352B-T1			
IC703	8-759-171-56	IC	XC61AN2712MR			
IC704	8-759-173-00	IC	XC61AN1102MR			

Ref. No.	Part No.	Description	Remark
		< JACK >	
J301	1-565-310-41	JACK (PHONES)	
J302	1-695-264-21	JACK 9P (CONTROLLER)	
J701	1-580-372-21	JACK, DC(POLARITY UNIFIED TYPE)	
		< COIL >	
L101	1-410-997-31	INDUCTOR CHIP 2.2uH	
L201	1-410-997-31	INDUCTOR CHIP 2.2uH	
L405	1-412-006-31	INDUCTOR CHIP 10uH	
L501	1-412-001-31	INDUCTOR CHIP 3.9uH	
L503	1-410-997-31	INDUCTOR CHIP 2.2uH	
L504	1-410-997-31	INDUCTOR CHIP 2.2uH	
L505	1-410-997-31	INDUCTOR CHIP 2.2uH	
L506	1-410-997-31	INDUCTOR CHIP 2.2uH	
L601	1-414-222-21	INDUCTOR 120uH	
L602	1-414-221-21	INDUCTOR 47uH	
L701	1-414-220-21	INDUCTOR 12.3uH	
L702	1-412-029-11	INDUCTOR CHIP 10uH	
L703	1-414-219-21	INDUCTOR 120uH	
L704	1-410-204-31	INDUCTOR CHIP 10uH	
		< TRANSISTOR >	
Q301	8-729-020-92	TRANSISTOR XN1504-TX	
Q302	8-729-403-45	TRANSISTOR XN1115	
Q501	8-729-403-07	TRANSISTOR XN1213	
Q502	8-729-403-42	TRANSISTOR XN1401	
Q503	8-729-402-42	TRANSISTOR UN5213	
Q504	8-729-230-60	TRANSISTOR 2SA1586-YG	
Q505	8-729-420-53	TRANSISTOR UN5115	
Q506	8-729-402-42	TRANSISTOR UN5213	
Q507	8-729-402-32	TRANSISTOR 2SD1819A-R	
Q601	8-729-820-86	TRANSISTOR 2SB1121-ST	
Q602	8-729-820-86	TRANSISTOR 2SB1121-ST	
Q701	8-729-020-93	TRANSISTOR 2SC2982C-TE12L	
Q702	8-729-807-87	TRANSISTOR 2SB1295-UL6	
Q703	8-729-403-17	TRANSISTOR XN1215	
Q704	8-729-420-53	TRANSISTOR UN5115	
Q705	8-729-402-32	TRANSISTOR 2SD1819A-R	
		< RESISTOR >	
R101	1-216-834-11	METAL CHIP 12K 5% 1/16W	
R102	1-216-834-11	METAL CHIP 12K 5% 1/16W	
R103	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R104	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R105	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R106	1-216-843-11	METAL CHIP 68K 5% 1/16W	
R107	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R108	1-216-843-11	METAL CHIP 68K 5% 1/16W	
R109	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R110	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R111	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R112	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R113	1-216-817-11	METAL CHIP 470 5% 1/16W	
R114	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R115	1-216-793-11	METAL GLAZE 4.7 5% 1/16W	
R201	1-216-834-11	METAL CHIP 12K 5% 1/16W	
R202	1-216-834-11	METAL CHIP 12K 5% 1/16W	
R203	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R204	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R205	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R206	1-216-843-11	METAL CHIP 68K 5% 1/16W	
R207	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R208	1-216-843-11	METAL CHIP 68K 5% 1/16W	
R209	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R210	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R211	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R212	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R213	1-216-817-11	METAL CHIP 470 5% 1/16W	
R214	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R215	1-216-793-11	METAL GLAZE 4.7 5% 1/16W	
R301	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R302	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R303	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R304	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R305	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R306	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R307	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R308	1-208-613-95	METAL GLAZE 0.39 10% 1/8W	
R309	1-216-826-11	METAL CHIP 2.7K 5% 1/16W	
R310	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R402	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R404	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R405	1-218-293-11	METAL GLAZE 24K 5% 1/16W	
R406	1-218-294-11	METAL GLAZE 30K 5% 1/16W	
R407	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R408	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R409	1-216-834-11	METAL CHIP 12K 5% 1/16W	
R410	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R501	1-216-813-11	METAL CHIP 220 5% 1/16W	
R502	1-216-813-11	METAL CHIP 220 5% 1/16W	
R503	1-216-813-11	METAL CHIP 220 5% 1/16W	
R504	1-216-813-11	METAL CHIP 220 5% 1/16W	
R505	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R506	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R507	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R508	1-216-809-11	METAL CHIP 100 5% 1/16W	
R509	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R510	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R511	1-216-809-11	METAL CHIP 100 5% 1/16W	
R512	1-216-845-11	METAL CHIP 100K 5% 1/16W	

MAIN

Ref.No.	Part No.	Description				Remark
R513	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R514	1-216-863-11	METAL GLAZE	3.3M	5%	1/16W	
R515	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R516	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R517	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R518	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R519	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R520	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R521	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R522	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R523	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R524	1-216-854-11	METAL CHIP	560K	5%	1/16W	
R525	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R526	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R527	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R528	1-216-818-11	METAL CHIP	560	5%	1/16W	
R529	1-216-809-11	METAL CHIP	100	5%	1/16W	
R530	1-218-332-11	METAL GLAZE	130K	5%	1/16W	
R531	1-216-814-11	METAL CHIP	270	5%	1/16W	
R532	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R533	1-216-814-11	METAL CHIP	270	5%	1/16W	
R534	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R535	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	
R536	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	
R537	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	
R538	1-216-834-11	METAL CHIP	12K	5%	1/16W	
R539	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R540	1-216-815-11	METAL CHIP	330	5%	1/16W	
R541	1-216-815-11	METAL CHIP	330	5%	1/16W	
R542	1-216-815-11	METAL CHIP	330	5%	1/16W	
R543	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R544	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R545	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R546	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R547	1-216-864-11	METAL CHIP	0	5%	1/16W	
R549	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R601	1-216-864-11	METAL CHIP	0	5%	1/16W	
R602	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R603	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R604	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	
R605	1-216-846-11	METAL CHIP	120K	5%	1/16W	
R606	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R607	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R608	1-218-293-11	METAL GLAZE	24K	5%	1/16W	
R609	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R610	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R611	1-216-808-11	METAL CHIP	82	5%	1/16W	
R612	1-216-808-11	METAL CHIP	82	5%	1/16W	
R613	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R614	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R615	1-218-293-11	METAL GLAZE	24K	5%	1/16W	
R616	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R617	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R618	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R619	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R620	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R621	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R622	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R623	1-216-809-11	METAL CHIP	100	5%	1/16W	
R624	1-208-613-95	METAL GLAZE	0.39	10%	1/8W	
R625	1-208-613-95	METAL GLAZE	0.39	10%	1/8W	
R626	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R627	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R628	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R629	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R630	1-216-846-11	METAL CHIP	120K	5%	1/16W	
R631	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R632	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R633	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R634	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R635	1-208-613-95	METAL GLAZE	0.39	10%	1/8W	
R636	1-208-613-95	METAL GLAZE	0.39	10%	1/8W	
R637	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R648	1-216-846-11	METAL CHIP	120K	5%	1/16W	
R701	1-216-824-11	METAL CHIP	1.8K	5%	1/16W	
R702	1-216-820-11	METAL CHIP	820	5%	1/16W	
R703	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R704	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R705	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	
R706	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R707	1-216-828-11	METAL CHIP	3.9K	5%	1/16W	
R708	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R709	1-218-751-11	METAL CHIP	300K	0.5%	1/16W	
R710	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R711	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	
R713	1-216-809-11	METAL CHIP	100	5%	1/16W	
		< SWITCH >				
S501	1-572-688-21	SWITCH, PUSH (1 KEY) (AC POWER)				
		< VIBRATOR >				
X501	1-579-961-21	VIBRATOR, CRYSTAL (49.512MHz)				
X502	1-579-962-21	VIBRATOR, CRYSTAL (22.5792MHz)				
X503	1-579-960-21	VIBRATOR, CERAMIC (6MHz)				

****

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
17	1-648-095-11	SWITCH FLEXIBLE BOARD	
75	1-648-054-11	MD FLEXIBLE BOARD	
D1	8-719-404-19	DIODE LN1251C (BATT)	
PH1	8-719-031-97	DIODE NJL5134KL (S END SENSOR)	
PH2	8-719-031-97	DIODE NJL5134KL (T END SENSOR)	
M901	1-698-015-11	MOTOR (REEL)	
M902	8-848-601-11	DRUM ASSY (DOU-19A)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-467-128-11	REMOTE CONTROL UNIT (RM-DT1MP)	
	3-388-724-01	CASE, CARRYING	
*	3-389-259-01	INDIVIDUAL CARTON	
	3-756-632-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH) (Canadian, AEP)	
	3-756-632-21	MANUAL, INSTRUCTION (ENGLISH) (US)	
	3-756-632-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, ITALIAN) (AEP)	
	3-756-632-51	MANUAL, INSTRUCTION (PORTUGUESE, SWEDISH, KOREAN) (AEP)	
	8-953-537-90	HEADPHONE MDR-E741MP//K SET	
	X-3329-657-1	ATTACHMENT ASSY	

9-957-590-11

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General Audio Group

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WMD-DT1

SONY

SERVICE MANUAL

6903

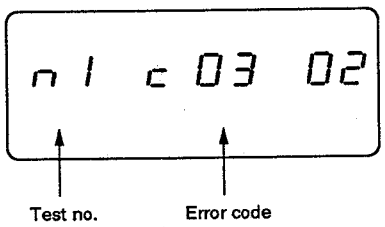
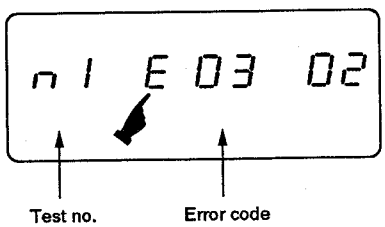
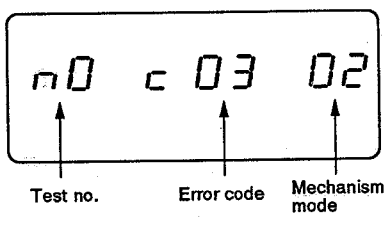
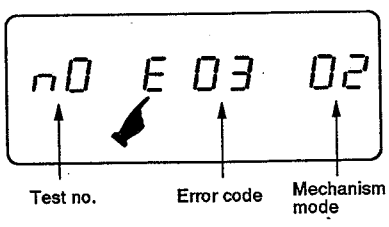
US Model
Canadian Model
AEP Model

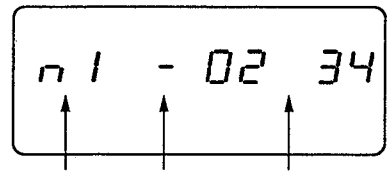
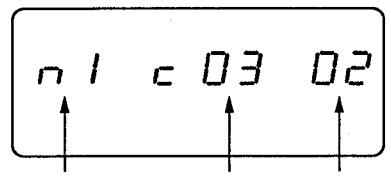
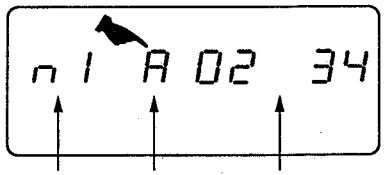
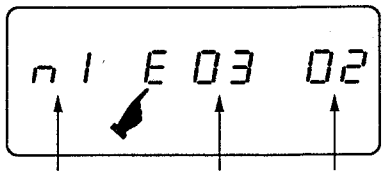
CORRECTION-1

Correct your service manual as shown below.

SECTION 3. TEST MODE

☛ : indicates corrected portion.

Page	INCORRECT	CORRECT
	3-3. CAUTION Display in Test Mode • When the CAUTION is detected, CAUTION and the error code will be displayed. • CAUTION can be released by pressing the PLAY key.  	**3-3. CAUTION Display in Test Mode** • When the CAUTION is detected, CAUTION and the error code will be displayed. • CAUTION can be released by pressing the PLAY key. 
8	**3-4. Normal Test Mode=0** • Operate the keys in the same way as in the normal mode. When CAUTION occurs, the error code and the mechanism operation mode at that time will be displayed on the LCD. (LCD display when CAUTION occurs)  	**3-4. Normal Test Mode=0** • Operate the keys in the same way as in the normal mode. When CAUTION occurs, the error code and the mechanism operation mode at that time will be displayed on the LCD. (LCD display when CAUTION occurs) 

Page	INCORRECT	CORRECT
9	**3-5. Error Rate Measurement Mode=1** • The error rate of the Ach or Bch is measured and the result will be displayed on the LCD. The error rate displayed can be selected by the BB/AVLS key. • Operate the keys in the same way as in the normal mode. When CAUTION occurs, the error code and the mechanism operation mode at that time will be displayed on the LCD. (LCD display in the test mode)  Test no. Ach (C for Bch) Error rate =0.0234 (LCD display when CAUTION occurs)  Test no. Error code Mechanism operation mode	**3-5. Error Rate Measurement Mode=1** • The error rate of the Ach or Bch is measured and the result will be displayed on the LCD. The error rate displayed can be selected by the BB/AVLS key. • Operate the keys in the same way as in the normal mode. When CAUTION occurs, the error code and the mechanism operation mode at that time will be displayed on the LCD. (LCD display in the test mode)  Test no. Ach (b for Bch) Error rate =0.0234 (LCD display when CAUTION occurs)  Test no. Error code Mechanism operation mode

SECTION 5. IC PIN FUNCTION

☛ : indicates corrected portion.

Page	INCORRECT				CORRECT			
17	IC503 SYSTEM CONTROL (CXP80620-457R)				IC503 SYSTEM CONTROL (CXP80620-457R)			
	Pin No.	Pin Name	I/O		Pin No.	Pin Name	I/O	
	8	SEL LOAD	O	Pin for determining Not tape-up when "	8	SEL LOAD	I	Pin for determining Not tape-up when "
	20	WAKE-UP2	O	Wake-up signal inpu	20	WAKE-UP2	I	Wake-up signal inpu

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SONY

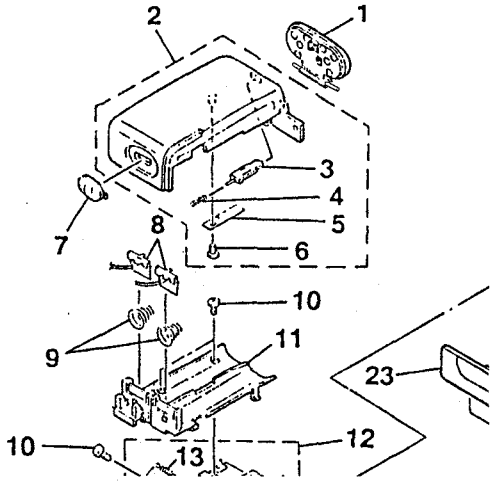
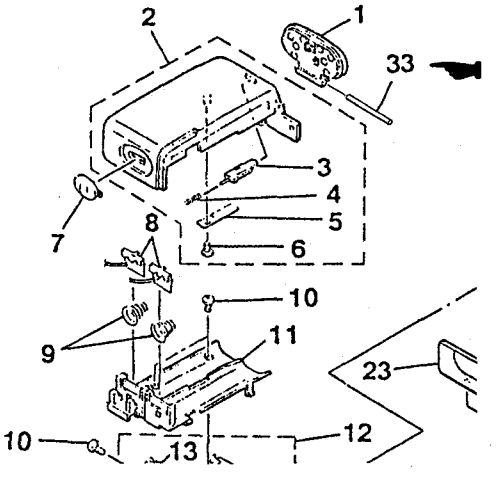
SERVICE MANUAL

US Model
Canadian Model
AEP Model

CORRECTION-2

Correct your service manual as shown below.

☛ : Indicates corrected portion

Page	INCORRECT	CORRECT
34	Ref. No. Part No. Description	Part No. Description
☛	33 ——— ———	* 3-912-233-01 SHAFT (BATTERY CASE LID)
		

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Personal A&V Products Company

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